THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. II.] Copyright, 1876, JAMES R. OSGOOD & CO. [NO. 64.

BOSTON, MARCH 17, 1877.

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THE verdict of the coroner's jury in the Ashtabula disaster is as explicit as could be desired, as to the responsibility for the catastrophe. Its finding with regard to the bad management of those who failed to use proper measures for the assistance of the sufferers, is probably just. The principal point is, however, the responsibility of the fall of the bridge itself; of this the verdict says that "the fall of the bridge was the result of defects and errors made in designing, constructing, and erecting it; that a great defect, and one which appears in many parts of the structure, was the dependence of every member for its efficient action on the probability that all or nearly all the others would retain their position, and do duty for which they were designed. Instead of giving to each member a positive connection with the rest, which nothing but a direct rupture could sever, the members of each truss were, instead of being fastened together, raised one upon the other, as illustrated by the following particulars: The deficient cross-section of portions of chords, and some of the main braces, and the insufficient strength and bad arrangement of both the horizontal and vertical transverse bracing; in the construction of the angle blocks, as finally modified without sufficient lugs or flanges to keep the ends of the main and counter braces from slipping out of place; in the construction of the packing and yokes used in binding together the main and counter braces at the points where they crossed each other: in the shimming of the top chords, to compensate the deficient length of some of their members; in the placing during the process of erection of thick beams where the plan required thin ones, and thin ones where it required thick ones. That the railroad company used and continued to use this bridge for about eleven years, during all of which time a careful inspection by a competent engineer could not have failed to discover these defects; for the neglect of such careful inspection the railroad company alone is responsible. That the responsibility of this fearful disaster and its consequent loss of life rests upon the railroad company, which, by its chief executive officer, planned and erected this bridge."

THE facts shown in the inquiry were mainly these: that Mr. Stone, the president of the road at the time the bridge was built, was the proprietor of a patent on the Howe truss bridge, which he was in the habit of building in wood; that he was not a trained constructor; that he insisted on constructing a bridge on his favorite plan in iron; that he discharged his engineer, or drove him to resign, for insisting that the braces of the bridge ought to be heavier than he, Mr. Stone, chose to have them; that he put incompetent men in charge of the construction and setting up of the bridge; that the construction of the bridge was faulty, and that in putting up it twice settled out of form before it could be tinkered into shape, — for all of which the responsibility rests on Mr. Stone. In view of this verdict it seems that suits for damages against the company by those who were injured, or the representatives of those who were lost, are likely to be successful in the courts; and we may hope — not for the sake of vengeance on the company, but for example's sake, and the future safety of the public — that they will be forthcoming. It is to be regretted that in such cases the remedy is practically against innocent shareholders rather than the guilty officials. But until criminal suits are provided for by law, the only pressure which can be brought to bear upon railroad companies is that of pecuniary loss; and even if the real offender goes untouched, and those who have trusted him have to atone for his offences, — for this fault was an offence, not merely an error, — the public must have protection. But there remains one lesson which the public are slow to learn, one which goes hard against their grain, but which will surely be repeated until they learn it, — that they must not put their trust in "practical men," where theoretical knowledge finds place.

IT is gratifying to know that the lesson of this disaster is not thrown away, and that engineers and companies are aroused by it to careful consideration of the condition of their bridges. The authorities of the Great Western Railway have taken the timely precaution of making a thorough examination of the Niagara suspension bridge, and have stopped traffic over it for that purpose. The bridge, built by Roebling twenty years ago, is a wire suspension-bridge of eight hundred and twenty feet span; and at the time it was built was perhaps the most daring work of its kind that had been undertaken. It is not likely that it has yet suffered any sensible deterioration; but for a structure in such a perilous position, the only safety is in careful and frequent inspection. We trust that this care of the Great Western is but an example of that which will be shown by all railroad companies in the inspection of their bridges.

A CURIOUS and not uninstructive casualty happened in the case of the Waltham Building in Bond Street, New York, which proved itself at once too secure and too insecure. The building took fire in the basement; and it is said that the night-watchman vindicated his usefulness by escaping through a window to give the alarm, and leaving his keys behind him. It was two hours before the firemen could make their way in or the fire could make its way out, so that they met, and then it was too late to save the building, which was burned with great loss. Queerly enough, it had been rated as fire-proof, because it was supposed to be safe against fire from without, its walls being of brick and iron; but its floors were of wood, and its hoistway proved a flue for carrying the flames through its whole height. It would seem to be reasonably clear that fire-proofing should begin at home, and that it is secured only where the interior of a building is incombustible. The insides of buildings in cities being fire-proof, the outsides may be trusted to take care of themselves; and when all one's neighbors are incombustible there is little danger of fire from without: so that the best way for the community to secure themselves against the communication of fire is to make buildings that will not burn. In this way every really fire-proof building is a blessing to its neighborhood, and several of them together are impregnable. Where they become the rule, as they are in many cities, there is little danger of fire except from the storage of extraordinarily combustible material; and it is then safe to close them as strongly as may be desired, without fear of their being dangerously secure.

IF repeated warnings will make the community careful to construct buildings that shall be secure, we Americans seem in a fair way to be converted. The falling of a large wholesale grocer's warehouse in New York a few days ago is the last example that we have heard of. So far as we can make out from the accounts in the papers, the front of the building fell out, and the greater part of the floors and their heavy load of merchandise tumbled into the street. We have as yet no account of the matter from experts, and the unskilful descriptions of the reporters do not give much indication of how the building was put together or how it fell; but it is probable that overloading the floors was the cause of the

fall, by which an adjoining house was partially crushed and the inmates of it endangered, though they fortunately escaped serious injury. There is some indication that the yielding of a floor pushed out an intermediate story of the front; for the lower story remained standing, and the upper part fell, not across the street, but into a tolerably compact heap. The watchman on duty naïvely declares that the building which tumbled down about his ears, as it were, was not overloaded; and the proprietor seems to have been taken by surprise. The truth is, that ordinary people have no way of knowing whether a building is overloaded or not, and need to have the question determined for them by experts. When a building which they have been accustomed to see standing comes tumbling down, perhaps under a less load than that which had previously given it its fatal strain, they are induced to ascribe the fall to some occult and indeterminable cause, just as the good people of a former day would refer the epidemic which their carelessness had invited, to a mysterious dispensation of Providence. It needs but a little of the common sense of Adam Bede to remind them that it "may be but the bearings o' the roof and walls wasn't right, else it wouldn't ha' come down." The examination of properly qualified inspectors is perhaps the only safeguard, for no probable number of accidents will work a change of heart in a business people; yet inspectors cannot be everywhere at all times. There would be probably a considerable security in the enforcement of the provision that is introduced into the proposed building-law of Providence, that the proper load of every warehouse floor should be computed when it is built, and at intervals afterward as it may deteriorate, and that it should be made penal to put more on it. This would naturally be but partially operative, for no occupant can be forced to know how much he is putting upon a floor, or to take account of a shifting load; nor would it be easy after a floor had fallen, to prove just what the load upon it had been. But the provision might make people more attentive by giving them some general idea of what a floor could be expected to bear, and furnishing a sort of rough classification of floors in respect of strength, to which they could become habituated.

Dr. Andrews's paper read before the archæological section of the Academy of Science in Chicago a few days ago, contained some statements concerning the relics of the mound-builders, which have not been generally known, and which show the builders in the new light of a people who made use of graphic characters, perhaps an alphabet, and of whom written records still remain. He quoted three analogous discoveries made at different times, and of marked significance. The first was an engraved slab of stone dug out of a mound by a body of soldiers encamped in Tennessee during the late war; the second a slab found later at the bottom of a mound at Rockford, Ill.; and the third a pair of stones, flat slabs of slate, exhumed this winter from a large mound near Davenport, Io. In all these cases the stones were found at the very bottom of large mounds, where they seemed to have been placed for records as we now place memorials in the corner-stones of buildings. The stones all bore drawings apparently more or less symbolic, in which representations of the sun and the crescent moon with human features were conspicuous; and in all of them were groups of characters, unintelligible but evidently significant, arranged in columns or in circles. Four of the characters in one of the stones found at Davenport were repeated on that found at Rockford. On two of the stones was a representation of a mound, and upon the mound an altar with a fire burning upon it. On one of the altars the body of a man or animal was burning, and about the base of the other lay three human bodies as if prepared for sacrifice or funeral rites, while a circle of men stood round with clasped hands. In each case the sun and moon were represented as spectators or principals in the ceremony, their participation being indicated by rays drawn from the suns to the altars. The fact that in these cases a thorough exploration of the mounds has brought these inscribed stones to light, while most of the examinations that have been undertaken hitherto have proved superficial, leads to the expectation that such stones may be usually found at the bottoms of the mounds, and hints at an entirely new field of study in this part of American archæology.

The great work which John Stow accomplished in the reign of Elizabeth is being again undertaken upon a larger scale; the scope of the present survey embracing the antiquities, the architecture, the commerce, the ecclesiastical and educational affairs, the government, the history, the various industries, the judicial and legal administration, the manufactures, the statistics, and the topography of the British metropolis. Mr. John Dexter, with whom the labor has been an ambition for many years past, has already made considerable progress; and his knowledge of the hydra-headed Government of London stands him in good stead in reducing to a few years what might well be a life's toil. As London has seventeen statutory definitions and no map, Mr. Dexter proposes to deal with the area within which the building-line continues unbroken by a field; i. e., the space between Ealing on the west and Upton (on the verge of Epping Forest) on the east, and between Wood Green on the north and Croydon on the south, — about forty times the compass of the capital of Elizabeth. The undertaking, extensive as it is, would be of importance if it should result in nothing more than the identification of historic sites, of which hundreds have passed away from present knowledge; but Mr. Dexter intends to issue from the press at irregular intervals, as leisure shall serve, various gleanings by the way, which will possess an interest peculiarly their own. Some of these may relate to the early connections of New England with London, as to which and other matters germane a priceless collection of materials not hitherto known to be in existence has just been placed at his disposal by a wealthy member of Parliament, who is descended from a member of the Long Parliament.

A new society, says the *Building News*, is being organized in Paris, for the preservation of the remains of old architecture throughout France. Those foreigners who have seen how, little by little, the precious old work in France is destroyed by neglect and misuse, or swept away bodily, especially in the towns, Rouen for example, where the fever for modern improvement has declared itself, will agree that every influence in favor of conservation is a thing to be grateful for. A great deal has been accomplished, it is true, within a generation past, through the influence of such men as Lassus, Viollet-le-Duc, Lenoir, and De Caumont. The *Société pour la Conservation des Monuments* under M. de Caumont's presidency has done much both in the direct care of old buildings, and in arousing a general interest in them, without which the effort to preserve them must be comparatively futile. A great number of the most important classical and mediæval works that remain have been brought under the immediate protection of the government by enrolling them in the honored list of *monuments historiques*. Yet even these, as the traveller in remote corners of France finds, are not always secure against neglect or even desecration; and the number of relics of old architecture is far too great to allow of their being all taken under state protection, to say nothing of their being, many of them, in private hands, and so subject to private caprice. There remains too the danger of injudicious restoration; for although much important service has really been rendered by careful and clever restorers here and there, there is among the French an abiding and mischievous desire for a shop-new brightness of aspect. This leads them every few years to chisel off from their house-fronts the firm crust of darkened color with which time tries to defend them against its own erosion, and to expose a fresh surface of soft stone to the action of the weather. The smug look which they give their restored buildings makes a painful impression on the visitor who sees the venerable interiors of St. Front and Angoulême furbished up from top to bottom in the whitest of stone, and hatched all over with the blackest of pointing till every expression of age is scored off from them. It is far less oppressive to see the old surface spotted conspicuously with fresh stones, as at Pisa and Florence, for then one still feels the age of the mass of building, and has a reasonable hope that a few more years will tone the discordant patches into harmony. It may be the function of the new society, and we can hope it will be, to crown their good influence by adding reverence to honor.

The Women's Pavilion. — On the 8th inst. took place the closing sale of buildings at the Centennial grounds, and among the buildings sold was the Women's Pavilion, which was bought for $1,325.

ARCHITECTURAL STUDENTS. — X.

EXAMPLES OF RENDERING: FRENCH.

THE student cannot have better examples of rendering than those that are done in the *ateliers* of the French *École des Beaux-Arts*. Fortunately these are much less inaccessible to the body of students here than they used to be. A good many American architects turn up in Paris during one portion or other of their training, and so see and bring home more or less of the French procedure. There are to be found here and there in the country a good many samples of good French drawing, and in one at least of the architectural schools there is thorough instruction in architectural rendering based on the French methods. Students who can neither go to Paris nor have access to these means of learning may yet, if they will get them, or if those who are charged with their instruction provide them, find a good deal of help in the photographs published by Lampué, the photographer of the French school. These comprise an admirable selection of the best designs produced in the school, all or pretty much all, we believe, of those which are "recompensed," as the saying is, in the monthly competitions, and the most important at least of the drawings offered for the grand prize. There are a great many of them, and they include a great variety of subjects. Every school in which architectural drawing is taught ought, we think, to have a good set of the original drawings of the French school, to serve as models to its pupils of one style at least of rendering, and that an extremely good one. We should think it desirable that every architect who attempts to train good draughtsmen in his office should supply himself with one or two models of this kind for their use; and we should say to any learner that it was worth his while to get at least a few of Lampué's photographs, well selected, which he can commonly do through some friend who visits Paris, and who is conversant with such matters, or even through some French dealer in this country.

The French drawings are frankly conventional; and they are none the worse for that perhaps, since it is quite impossible to give a complete explanation of any architectural design without conventional drawing. Indeed it may perhaps be rightly said, though not without some appearance of paradox, that a rigorously conventional system of representation is for such work both truer and honester than a habit of freer and more naturalistic rendering; for a well-conventionalized system may convey what it has to express to him who thoroughly understands its conventions, with more precision than an imitative means of expression, just as a written language, the most conventional and arbitrary of contrivances, is a more satisfactory means of communicating thought than picture-writing, — because it has been carefully worked out for just this purpose and no other. It may be honester; for a system by which every fact is indicated in a definite way offers less temptation to the tricks of exaggeration or concealment, by which the aspect of a design is tinkered to suit a supposed or known taste, than one which leaves the freest scope to individual caprice. The points that will attract attention in the French drawings are their intelligent system of interpretation, their thorough workmanship, and their pervading artistic feeling. Their decision of handling and the clearness with which all the details are indicated, while each is kept in its place, and breadth of general effect secured, are admirable. So is the skilful way in which the accessories are usually drawn. They are drawn more or less slightly in due subordination to the principal subject, but always in a way to indicate the leading characteristics of the objects. The sculpture, of which much is introduced, being closely associated with the architecture, is sure to be sketched with care and spirit; and nothing shows the general superiority of the French draughtsmen more than their skill in this. Vegetation and other subordinate accessories are sketched with less completeness, but always significantly. Of course there are better and worse among them, and there are of course admirable architectural draughtsmen in all countries; but while we may say that we have scarcely ever seen a bad drawing in the competitions of the French school, it is safe to add that in no country is the general standard of draughtsmen's work so high, and that in the United States there are comparatively very few, even among the best, whose work would stand comparison with the average work of a French *atelier*.

The student will notice that in the French drawings, most care is given to absolute clearness of interpretation, and to the artistic unity and effect to be got by gradation of tint and contrast. This is attained — apart from actual good delineation, in which the French are always strong — by a carefully arranged scheme of graduated tints, adjusted with great nicety over the whole drawing, and skilfully accentuated in putting in the detail. This adjustment of tints cannot be accomplished except with the brush; and French drawings are universally made with the brush, and, as a rule, in color. They are almost always what are called geometrical drawings, perspectives being rarely used, — too rarely, — and these being usually very slight and sketchy. The different planes in elevations are discriminated from each other by delicate variations in tint; the shadows are cast with careful precision, and the detail drawn with rigorous exactness. Every wash that is laid on, whether of color or shade, is nicely graduated from above downwards, being deepest at the top. Thus a consistent effect of gradation is given to the whole drawing: every tint, every shadow, the shade in every window, is graduated in conformity to the whole; and the rendering of the detail is made to conform to the same effect, delicately drawn, and heightened with well-considered emphasis.

This is of course an artificially conventionalized system, and, like all such, is liable to abuse; but its conventions are, on the whole, conformable to the general facts in nature; for in nature every light and shadow, and every fair surface of color, is invariably a graduated tint; and under almost all circumstances, these tints are deeper at the top than at the bottom, in appearance at least, whether from contrast with a bright sky above, or from disturbance by reflected light from the ground below. An experiment with the opposite treatment will convince the student at once that it is not only artistically disagreeable, but harshly unnatural, and only less offensive than the attempt at free and naturalistic treatment of a geometrical drawing. On the other hand, its artistic influence is excellent; for it keeps constantly before the designer's mind the paramount importance of breadth and unity. The quiet subordination of his whole rendering will itself be a prophylactic against confusion or extravagance in design; its broad graduation will help him to study with care the effects of contrast that may be displayed upon it. The grouping of parts, the arrangement of openings, the disposition of ornament, will show against his carefully toned background in a way that will compel a careful consideration; his eye will be made sensitive to the value of breadth and of accent. The use of the brush, and the study of color to which it naturally leads, are no small contingent advantages to be encouraged by this sort of work, especially in these days, when by a curious coincidence the general interest in color-decoration is growing very much; and, at the same time, the use of the pen is displacing it among draughtsmen, in England and the United States at least. We do not argue that the French system of architectural drawing is the best that can be devised; but we are convinced that it is not only the most consistent, but on the whole the most serviceable and instructive, that has yet been developed. The American draughtsman cannot do better than copy carefully such good examples as he can get, — original drawings in color, if he can get access to them; or if not, photographs, to be copied with the brush, in ink or sepia. The encouragement of thorough workmanship which it will give will not be the least of its good influences upon him.

The weak point in the French system is its neglect of perspective, by which it emphatically needs to be supplemented. It may be remembered, however, that the use of perspective, essential as it is, lies in studying the massing of a design, or else in such sketching of detail as must necessarily be done mainly by the eye, for illustration, where rigorous construction is obviously impracticable; that the use of perspective is illustrative, in fact, while that of "geometrical" drawing is, so to speak, exegetical; and that though it needs to be checked by perspective, the serious and minute study of design is always by "geometrical" drawings. On the other hand, the French thoroughness in the study of interior sections of their buildings, a thing which is much slighted here and even in England, we believe, is one of their strong points. It is of the greatest advantage in helping to bring

the interior of a whole building into keeping, a matter in which we are but very moderately successful, and as leading to the study of color. It hardly need be said that where color plays the *rôle* that it now does in interior work, the use of the brush instead of the pen is most essential.

For French examples of perspective drawing, mainly in mediæval work, we commend the student to the unrivalled drawings scattered through M. Viollet-le-Duc's books, especially the *Dictionnaire de l'Architecture Française*. These he will naturally be tempted to copy with the pen or pencil, though the author, who draws them all himself, true to the French instinct, has handled the wood-cuts in a way that invites the brush almost as much as the pen: indeed, it is pretty evident that in drawing them on the block he has for the most part washed in his tints with the brush, leaving it to the engravers to interpret them in lines. We know of no drawings in which the beauty and refinement of the best Gothic architecture are set forth so satisfactorily as in these, from the architect's point of view at least. We also commend for slighter and more general sketches, certain wood-cuts drawn by Tomaskiewicz, of which we have seen a good many here and there of late, and notably the illustrations of M. Félix Narjou's *Notes de Voyage*, some of which have been published in our own columns, though more or less marred in effect by the necessary imperfections of newspaper printing. They are admirably drawn, not overloaded with tints, and have all the characteristics of clear, refined, and well accentuated pen-drawings. Finally we would suggest, for more elaborate practice, copying some of the many French architectural etchings, among which we may mention as excellent in their several ways, those of Guillaumot and Rochebrune.

STUDIES OF INTERIOR DECORATION.

III.

In the second paper of this series we endeavored to show how the idea of the wall-decoration of a certain room was by process of reasoning derived from considerations of its aspect and of various given conditions of occupation and use. It now remains for us to take up the question of the ceiling, which as indicated in fig. 3, Plate II., has a large cornice and a panel-moulding of stucco.

In a harmony of color obtained by an arrangement of neutral and positive tints, such as the necessities of the problem have established on our walls, the appearance of white in any quantity, as in the ceiling and in the marble chimney-piece, if it is not an element of intolerable discord, at least leaves upon the mind a sense of incompleteness. If our conditions required the retention of these features, we should have been compelled, in order not to isolate them, to treat our walls with very light and tender tones, depending for the desired effect of elegance and luxury on delicate figures or medallions in colors liberally enriched with gold. Such a treatment implies a sacrifice of the idea of hospitable warmth with which we started. Until his white paper has been entirely overlaid by his washes, the painter in water-colors can obtain no effect of nature.

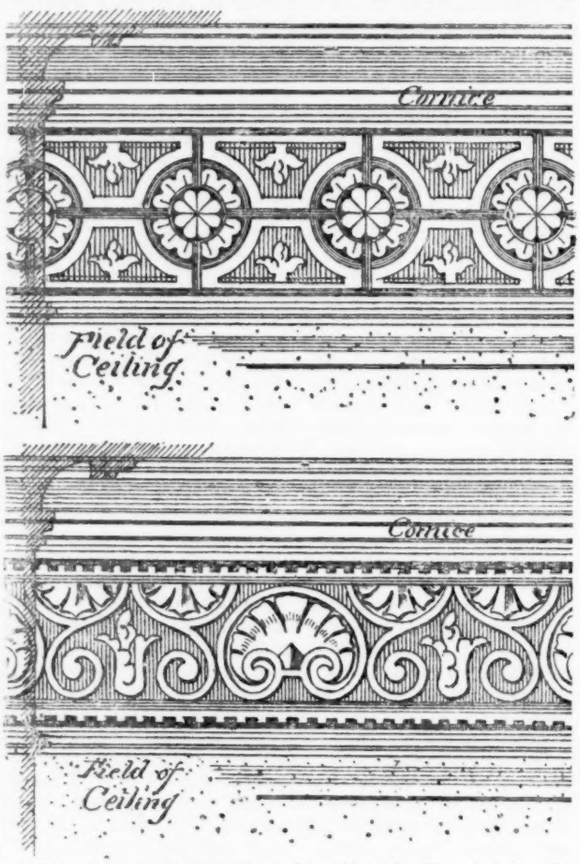
For the sake of harmony therefore, and in order to avoid any harsh line of demarcation at any point, we should entirely enclose the apartment with a homogeneous decorative treatment. Our walls must be reconciled with the floor, and our ceiling be made consistent with the walls.

It being recognized then that we must get rid of the whiteness of the ceiling, the question is, How can we enhance our decorative effect in so doing? We must not lose sight of the fact that we are to create an effect of light and warmth, as the apartment receives no direct light from the sun. Our walls are occupied by four horizontal zones of various values in color and dimensions, having a natural tendency to diminish the apparent height of the room. A dark or heavy treatment of the ceiling would absorb the little light which we have, would oppress the room with its weight, and tend still further to diminish its apparent height. It is a legitimate conclusion therefore, that the general effect of the ceiling should be lighter than the walls, and that the walls should melt into the ceiling by harmonious degrees of color, hereby correcting or excusing the error of the wall-treatment, and restoring to the room its proper vertical dimensions.

Consistently with this conclusion, our cornice should not be treated as the crowning feature of the walls, thereby defining and drawing attention to their limitation of height, but rather as a means by which the walls may be introduced into the ceiling, and the line of demarcation between the two features as nearly as possible obliterated. The feature of the walls which is nearest to the ceiling is the frieze, and this, as we have seen, is so far the most brilliant and spirited part of the composition, — a play of brown branches, green leaves, and bright yellow flowers, on a field of buff and gold. Now by spreading over the ceiling all the characteristic features of this frieze, we should accomplish our object, indeed, most directly and with the least possible trouble; but in so doing the frieze would immediately lose its predominance and interest, and cease to play its due part in the melody of color. Whatever we do, the frieze must not be rendered less precious or peculiar by extension or by incautious repetitions. It must strike the highest note.

The difficulty may be met by taking up certain *motifs* or suggestions of color in the frieze, and using them in our ceiling with such discretion that the frieze shall maintain an easy predominance without acting as a zone distinctly dividing the ceiling from the wall.

The feature of the ceiling nearest the frieze is the belt or border surrounding the central field. Evidently the border should be relatively dark, and the field light. If there were no bright frieze on the wall, we might reverse the situation, and give to this border the predominance of the frieze, making the field of the ceiling by comparison darker. As it is, the frieze must control the treatment of the ceiling. Now if we occupy this border with the cool tea-green which occurs in the frieze, and is its characteristic local color, and the centre field with a pale but clear echo of the warm buff in its background, — leaving untouched the yellowness of the flowers, the motion of the brown branches, and the gold against which they



are defined, — we shall have brought walls and ceiling into loyalty to the same key-note without competing with the frieze.

Between the frieze and this neutral green belt of the ceiling, there is interposed the cornice. This we treat with the same green and with the neutral colors of the wall-screen below, recalling faintly in the smaller mouldings certain characteristic notes of color, — the red and black of the walls, — in such a manner as to give detail and refinement to the cornice, and cause it to melt almost imperceptibly into the ceiling. The stucco moulding between the belt and the field of the ceiling again echoes some of the darker tones below, so as to form a clear division between the two features.

By this treatment we have brought the ceiling into harmony with the walls; we have done just enough to make it inconspicuous, no more. At this point we might safely leave it if we could be content with a negative virtue. But as the problem is to make the room beautiful, the ceiling presents an area far too important to remain quite without enrichment or incident of some sort, to give it character and interest. This enrichment may be moderately applied either to the field or to the border; not to both, however, as this would create conflicting interests and destroy the repose which is as essential here as in the walls. If applied to the field, it should be in the form of a pale damask figure, buff upon buff, — the background and the figure occupying about an equal area, — a presence rather suspected than acknowledged. (See Plate II. fig. 2.) If used in the border, a more emphatic treat-

STUDIES OF INTERIOR DECORATION — PLATE II

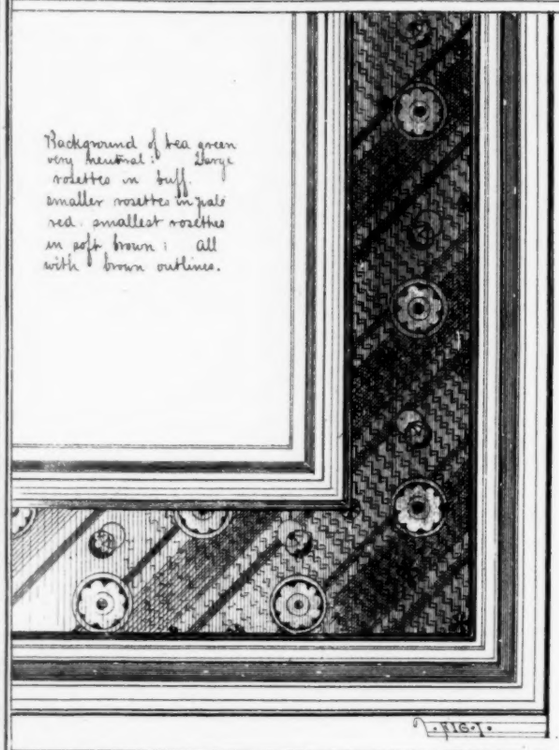

Background of tea green very neutral: Large rosettes in buff smaller rosettes in pale red. smallest rosettes in soft brown: all with brown outlines.

FIG. I.

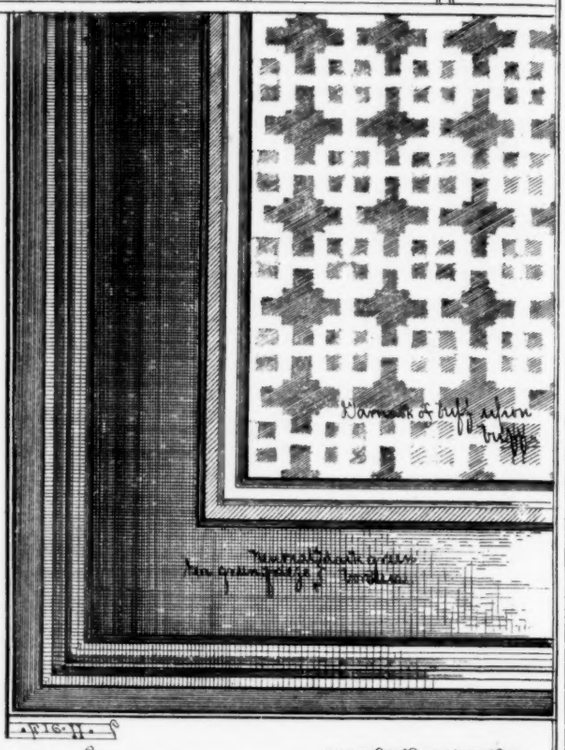


FIG. II.

EDWARD DEWSON DEL.

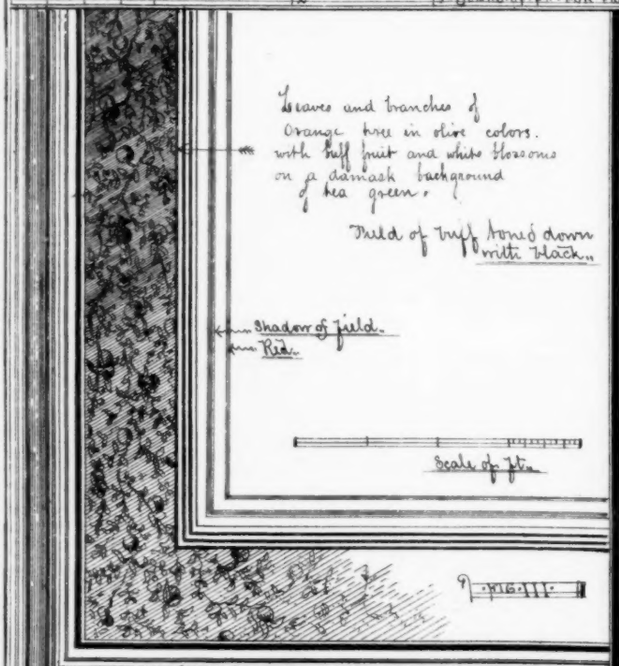
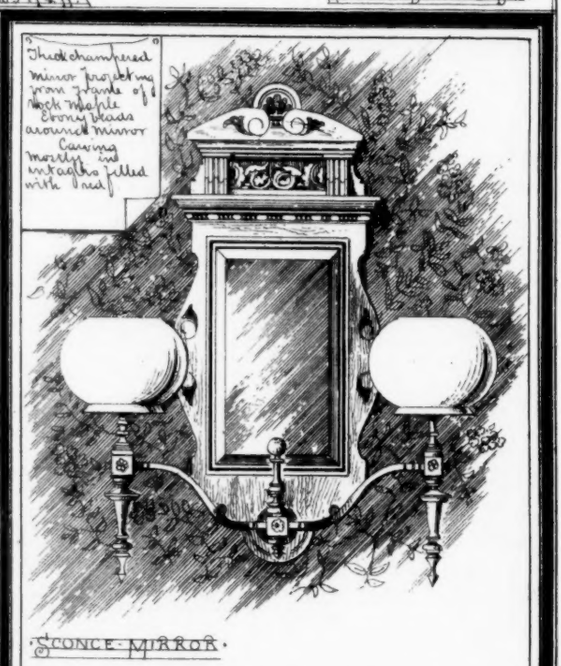

Leaves and branches of Orange tree in olive colors. with buff fruit and white blossoms on a damask background of tea green.
Field of buff toned down with black.
Shadow of field.
Red.
Scale of ft.

FIG. III.


Thick chamfered mirror projecting from 7 sides of eight sided Stone plaque around Mirror Carving mostly intaglio filled with red

SCONCE MIRROR

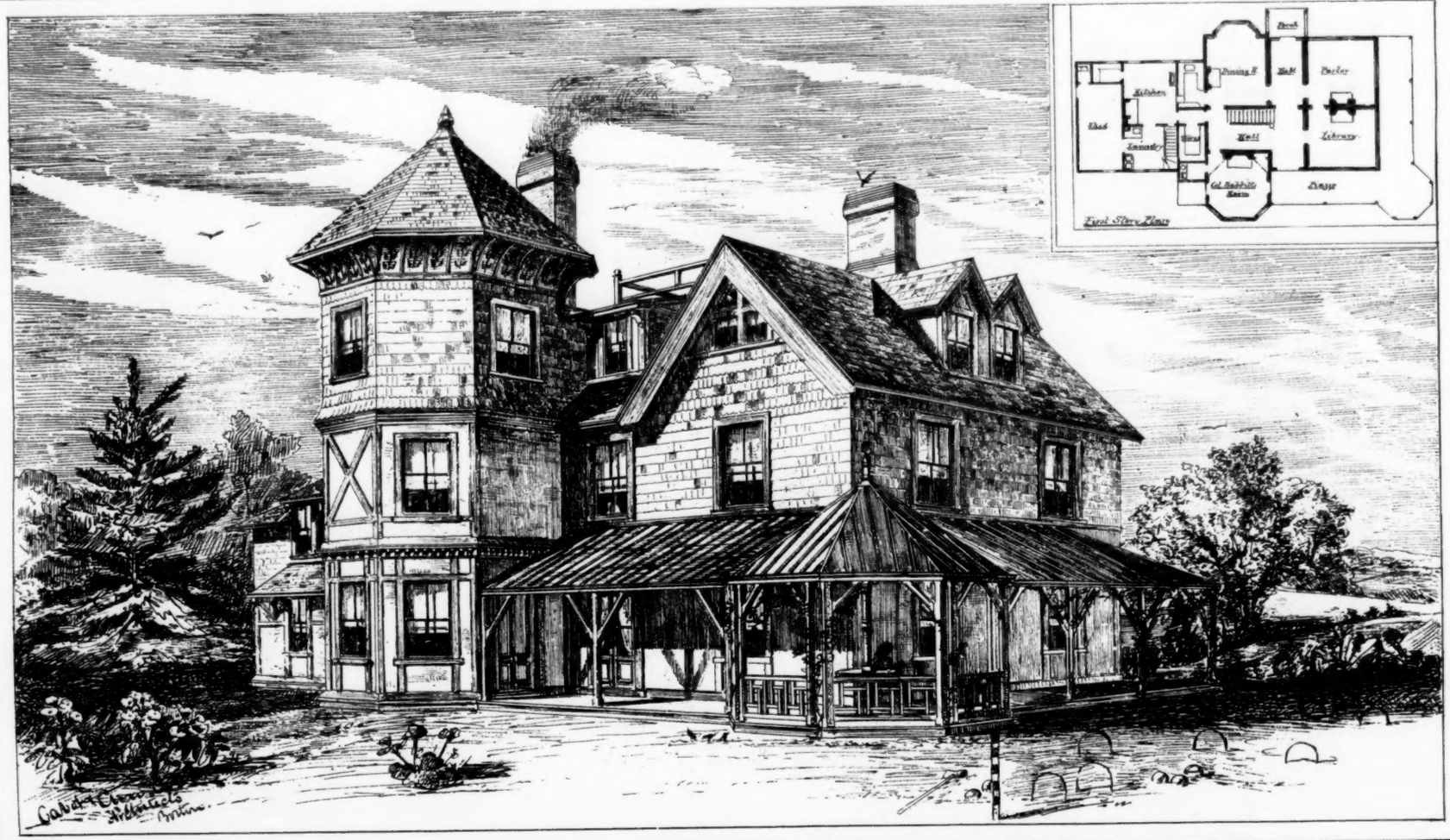
SCALE 3 ONE INCHES

CEILING DECORATION

HELIOTYPE

JAMES R. OSGOOD & CO. BOSTON

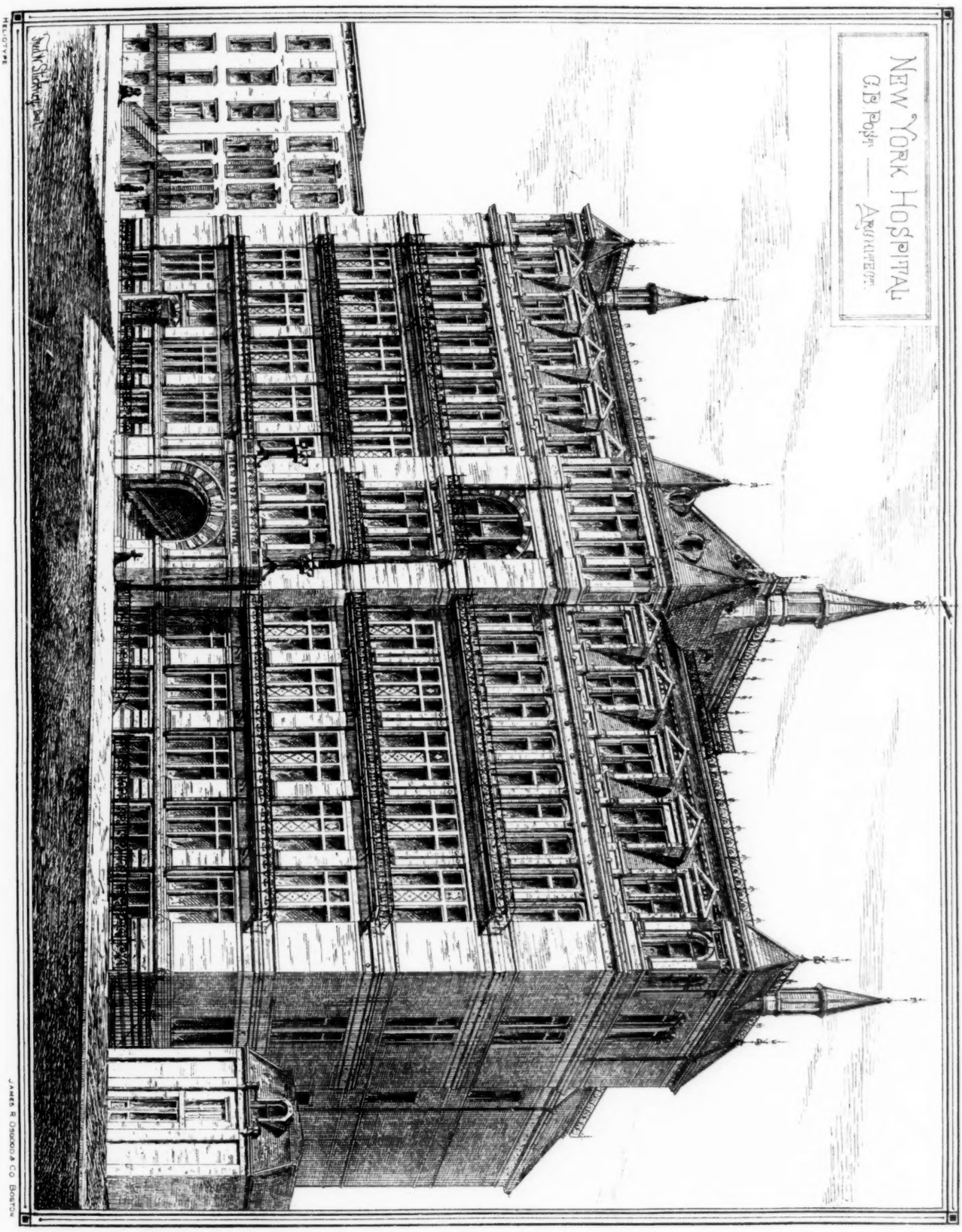
CHAPEL FOR ST. MICHAEL'S PARISH, BRISTOL, R.I. STEPHEN C. EARLE, ARCHITECT, BOSTON.
PLAN.
Vestibule
Inner Class Room
Class Room
Class Room
Porch
Organ
76'
52'
HELIOTYPE
JAMES R. OSGOOD & CO. BOSTON.



House at Pomfret, Conn. for Col H.A. Babbitt. E.C. Cabot and F.W. Chandler Archts, Boston.

Heliotype

James R. Osgood & Co. Boston


NEW YORK HOSPITAL
G.B. Post —— Architect
HELIOTYPE
JAMES R. OSGOOD & CO. BOSTON

ment is practicable, always having in view the absolute necessity of keeping the frieze distinctly pre-eminent. A greater emphasis at this point is admissible, because the area to be treated is much smaller and the tone darker; it is therefore the more attractive field for decoration. The design for this decoration should be such that it would be read as well, be equally intelligible, from whatever portion of the room it might be seen; there should be no "upside-down" to it. It should not follow any centre line in the belt, or have any fixed or recurrent relations with its borders. It should not be symmetrical or formal in any way. Any such decoration, for example, as is suggested in these diagrams, would be too monumental for the place, — implying an architectural treatment which is not justified by the treatment of the wall-surfaces below. Japanese motives, which studiously disregard symmetry, and are concerned only with balance of parts and subtle harmonies of color, at once occur to the mind. Marguerites, or any other round, regular, rosette forms, irregularly spaced with varying sizes and with gradations of tint, buff, red, brown, all neutralized and soft upon our pale green background, — this treatment, as exhibited in Plate II. fig. 1, would exactly fulfil our conditions. We also need a texture similar to that of the wall-papers, but we seek in vain for any such pattern: it cannot be found; and following the rule imposed upon us, we finally, after much search and deliberation, settle upon a paper which has loosely flowing soft green branches and leaves, with round buff fruit-forms, wandering over a pale diaper formed of two light green shades; the general character of which is set forth in fig. 3 of Plate II. As this figure encounters the borders of the belt at frequent intervals, an enforcement by color of the small moulding adjacent on either side becomes necessary. Fortunately the green of the leaves in this composition is almost exactly that of the green in the frieze; and the pale or neutralized buff of the fruit-forms exactly such as can be repeated, according to our ideal, on the field of the ceiling.

The effect produced upon the mind through the eye, by a combination of various colors and forms such as are employed in the decoration of this room, by the harmony resulting from their contrasts and repetitions, from their lines and proportions, is precisely analogous to that produced upon the mind through the ear, by a musical composition. And this result has been reached, not by any great expenditure of money; not by accident — for music is not fortuitous; nor yet by following a fashion — for there is no room like it elsewhere; but by confining the artistic faculty of "feeling" or taste within limits deliberately established by common sense. H. V. B.

THE ILLUSTRATIONS.

THE NEW YORK HOSPITAL. MR. GEORGE B. POST, ARCHITECT.

(120 Broadway, New York, N.Y.)

THE new building of the New York Hospital, in West Fifteenth Street, between Fifth and Sixth Avenues, was opened on the 16th instant. The old City Hospital was situated on Church Street, and was founded in 1773 under a charter from King George III. The extension of Pearl Street necessitated the removal of the old building, and in 1874 the present new building was begun. It will not be insured, as it is as nearly as possible fire-proof, being built throughout of iron, brick, and stone. It is intended to accommodate two hundred patients, which will all be pay cases, the occupants of the wards being charged one dollar per day. For those who can afford better accommodation, a number of rooms have been fitted up, the object being to make the institution self-supporting, and to secure the best of treatment. The cost of the building, including the ground, will be nearly one million dollars.

HOUSE AT POMFRET, CONN., FOR COL. H. A. BABBITT. MESSRS. CABOT AND CHANDLER, ARCHITECTS.

(60 Devonshire Street, Boston, Mass.)

STUDIES OF DECORATION. — II.

DESIGNS ILLUSTRATING THE TREATMENT OF A CEILING.

See preceding article.

CHAPEL OF ST. MICHAEL'S PARISH, BRISTOL, R.I. MR. STEPHEN C. EARLE, ARCHITECT.

(9 Pemberton Square, Boston, Mass).

This chapel is built of Longmeadow brown-stone, in random squares of rock face work. The main room is finished up into the roof to a height of twenty-five feet. The inside finish is of ash, and the walls and ceilings are tinted and decorated in water-color. Cost about $12,000.

THE EXPERTS AND THE NEW YORK CAPITOL.

THE following letter has been addressed to the leading New York papers: —

The undersigned have recently appeared before the joint Committees of Ways and Means and Finance of the State Legislature, at their request, to testify as experts as to the propriety of the changes made in the plans of the architect for the State Capitol building by the Advisory Board, subject to which plans some work has been already executed. The assertion has been made in the daily papers that the undersigned are representatives of the Renaissance school of architects, and that therefore their testimony is of no value in this case, as the upper stories and porches, as arranged by the Advisory Board, are of Gothic design, and that their opposition to the design is a natural result of the "notorious" war of styles. Were it true that the undersigned were exclusively devoted to the practice of Renaissance architecture, their opinion should for that very reason be entitled to very great weight, as the building practically is more than half completed in Renaissance architecture of the most distinctly marked character. But in reality they mainly belong to a more liberal school, and have severally studied and practised in both styles, while one of the subscribers has never designed except in the most pure Gothic. It has been stated that some of the subscribers have never examined the amended plans of the Advisory Board, and that consequently, being ignorant of the designs, their criticism is valueless. Those of the subscribers who had no opportunity to examine the amended plans are familiar with the published plans of the Advisory Board, and have seen the work already executed under its direction and in conformity with its final detailed drawings. The latter alone is sufficient to show in the most emphatic and conclusive manner that no amendment of the published drawings of the Advisory Board, while the system of design which they have adopted is retained, can reduce to harmony elements so discordant as pure horizontal or Italian Renaissance surmounted by Romanesque forms, treated with late Gothic and Moresque details.

The undersigned maintain that were they appointed as judges to select a design for a capitol building, they would without hesitation choose that design which combined most perfectly the best solution of the practical problem of convenience and constructive merit with artistic excellence, without regard to the style in which it was studied; but they certainly would consider it a disqualifying defect in any design were one style used for the lower half of the building and a radically different one for the remainder. The fact that the Advisory Board have supplemented an Italian Renaissance design already completed for more than one-half of the height of its walls by a design essentially Gothic, is practically either an assertion on their part that it is impossible to achieve a satisfactory result by completing the building in the style in which it was commenced, or an admission that they were incompetent to undertake to do so. The magnificent examples of Italy and Europe generally are a sufficient answer to the first position. If the second is accepted, it was the clear professional duty of the two architects on the board to resign their positions.

The examination of the work already executed from the amended designs has served to confirm the undersigned in their opinions formed at the time at which their attention was first directed to the published design of the Advisory Board, that if carried into execution it would be totally wanting in unity, and consequently an architectural failure.

As size, beauty of material, and workmanship, form the first elements of grandeur, the structure, with its great mass and incongruous magnificence, would vitiate instead of educating the taste of the people; and should the public improve in artistic appreciation, it would be received at its just value as a lasting monument to the narrow-mindedness and blind devotion to a favorite style, which has led the authors of the amended design to ignore all considerations of æsthetical proprieties in the plans which they have prepared; and if allowed to be erected without formal protest, it would be a perpetual reflection upon the architectural skill of the generation in whose time it was erected.

GEORGE B. POST.
R. M. HUNT.
N. LE BRUN.
HENRY DUDLEY.
D. LIENAU.

NEW YORK, Tuesday, March 6, 1877.

AMERICAN INSTITUTE OF ARCHITECTS.

BOARD OF TRUSTEES.

REGULAR quarterly meeting, Thursday, March 1, 1877.

Present, Messrs. Dudley, Haight, R. G. Hatfield, Hunt, Pfeiffer, Walter, and Bloor. Mr. Walter, President, in the chair.

The Secretary presented a number of communications; . . . a letter from Mr. Robert Briggs offering to read a paper before the next Convention on "The Relation of External Moisture of Air to the Temperature of Comfort or Health."

The Secretary was instructed to accept Mr. Briggs's offer. . . . The Secretary stated that all the Chapters had been requested to prepare papers for the Convention. . . . The Secretary was directed to have five hundred copies of the By-Laws printed. . . .

The time for the regular monthly meetings was changed from the third Thursday of the month to the first Thursday, so as to accord with the days for the general quarterly meetings of the Board.

The Secretary presented answers to the letters issued for infor-

mation as to adjudicated cases bearing on the emoluments of architects through the operation of a lien law or otherwise. . . . .

The communications on the subject were referred to Mr. Hunt as a committee of one to report at the next meeting of the Board.

NEW YORK CHAPTER, A. I. A.

Special meeting held Thursday, Feb. 14, 1877.

On motion of Mr. Hunt, seconded by the Secretary, the following resolutions were carried unanimously : —

Resolved, That the New York Chapter of the American Institute of Architects approve of and concur in the provisions contained in the report of the Committee on Examinations, relating to theatres hereafter to be erected in the city of New York, as set forth in " An Act to provide for the Stability of Construction and Security against Conflagration, Panic, or other Accident, in Theatres hereafter to be erected in the City of New York;" and that the said Committee be requested to take such steps as they may deem expedient, in order, if possible, to secure its passage as a law during the present session of the State Legislature.

Resolved, That the New York Chapter of the American Institute of Architects approve of and concur in the recommendations contained in the report of the Committee on Examinations, relating to measures deemed necessary to provide for the security of the public in existing theatres in the city of New York; and that the Secretary of said Chapter be requested to transmit a copy of the said report to the Superintendent of Buildings, together with a copy of this resolution.

On motion of Mr. Haight, a vote of thanks was extended to the Committee on Examinations, for the reports just presented by them.

Regular business meeting held Tuesday, Feb. 6, 1877.

Under head of reports from standing committees : —

The Chair reported from the Committee on Examinations, that the two documents adopted by the Chapter at its last meeting, in relation to prospective and existing theatres, had been officially indorsed by the Board of Fire Underwriters, and had been forwarded to the State Legislature.

. . . . . .

The President and Secretary were empowered to prepare and sign a protest, in the name of the Chapter, against the transfer of the building-department of the city of New York to the fire-department, and to transmit the same to the State Legislature.

CLEOPATRA'S NEEDLE.

THE obelisk which is usually known as Cleopatra's Needle — but which is only one of a group of three, once known as Cleopatra's Needles, one of which is still standing not far from its fallen comrade at Alexandria, while the third stands in the Place de la Concorde, Paris — has a curious modern history. In 1801 it was attempted to remove it to England, as a memorial of the evacuation of Egypt by the French; and to this end voluntary contributions of a certain number of days' pay were obtained from English soldiers and sailors, the largest prize French frigate was purchased, and part of a stone jetty was built by soldiers and sailors detailed for the purpose. But all this was brought to an end by orders from the commanders of the naval and military forces in the Mediterranean, who objected, — one because of the damage that such employment would cause to uniforms and equipments, the other because of the danger to which the crew of the vessel transporting the obelisk would be exposed. The attempt was therefore abandoned, the contributions were returned, and the events of the campaign were inscribed upon a bronze plate which was let into a side of the obelisk, and has since that time been stolen by Turks or others. In 1819 Mehemet Ali presented it to the Prince Regent, and since that time various plans for its removal have been considered, and abandoned on the ground of expense. The plan which Mr. Dixon has adopted for its portage to the Thames Embankment we briefly mentioned not long since. He proposes to incase the obelisk — which measures sixty-eight and a half feet, and nearly seven feet at the base — with a cylinder of iron, with strong diaphragms on the inside, calked where the obelisk passes through them so as to form water-tight compartments. The cylinder is to be ninety-five feet long by fifteen in diameter, and will draw nine feet of water. The cylinder and its enclosed obelisk will be rolled to the water on ways laid for that purpose. After it is launched, the keel, steering-apparatus, pumps, spars, etc., will be fixed, and the vessel properly ballasted. When it reaches London it will be lifted to the top of the embankment, and rolled to the site it is to occupy. The casing will be removed, and the obelisk will be raised by the aid of hydraulic rams to such a height that the level of its axis will be a little above the level occupied by its centre of gravity when the obelisk is upright. Trunnions supported in a proper manner will be then attached to its sides ; and it will be allowed to revolve on them slowly until it becomes upright, after which the pedestal will be built up under it. The whole cost of these operations is estimated at about $50,000, which is about one-eighth of the sum expended in getting the French obelisk in place.

MONUMENT ON DORCHESTER HEIGHTS. — It is said that the proposed monument on Dorchester Heights is to be dedicated April 19.

CORRESPONDENCE.

THE STORM. — FALL OF A WAREHOUSE. — THE BOND STREET FIRE. — PANIC IN THE CHURCH OF ST. FRANCIS XAVIER. — THE PROPOSED MUNICIPAL BUREAU OF ARCHITECTURE.

NEW YORK.

THERE is little to report from the metropolis but disaster and wreck. The storm which swept over the city on the 9th inst. played havoc with parts and portions of buildings, involving an aggregate loss which will probably reach $100,000. In particular damage was wrought to the mock cornices of sheet iron, which show broad surfaces and many angles to the wind, and which being insecurely fastened were curled up and ripped off by the wind. The Stevens Apartment House at Broadway and Twenty-Seventh Street suffered in this respect, the racket and roar of the ripping roof creating quite a consternation among the occupants of the house. Of plate glass and other windows broken the number is beyond count; and it certainly is little to the credit of the glaziers that it should fail so completely in the emergency of a not over-violent storm.

On the evening preceding, about ten o'clock, the wholesale grocery warehouse of Henry Welsh on Greenwich and Franklin Streets fell, a mass of ruins. It was a five-story structure built on made ground, and packed to the ceilings on the several floors above the first with such weighty commodities as salt, sugar, and flour. The building, originally a sugar-house, had been standing about thirty years; but the fall came without the least warning, luckily without loss of life, though a small frame-house adjoining was crushed beneath the *débris*, and the family of eight was buried for a while, but was dug out without serious injury. The total loss will reach over sixty thousand dollars. The possibility of similar accidents from other overloaded warehouses in the city should call for an exercise of some prevention on the part of the Department of Buildings. In fact, the superintendent came out the next day with his standard explanation, that he but recently had men engaged in this very work of ferreting out overladen buildings, but for want of funds was compelled to withdraw them. There are hundreds of altered buildings, originally built for tenements, and afterwards used for warehouses, which might in like manner at any moment fall in ruins.

Tuesday evening, the 6th inst., was marked by the burning of the Waltham Buildings on Bond Street near Broadway, the greatest fire our city has suffered by since the Broadway fire over a year ago. The buildings were great six-storied iron-fronted structures, with heavy brick walls on sides and rear. Stair-wells, ventilating-shafts, and light areas through the central portions of the building gave the flames full vent. Early in the evening the presence of fire somewhere in the basement or sub-basement was discovered, and no time was lost in summoning the fire-department; but the extraordinary precautions taken to make the lower portions of the building burglar-proof were equally effective against the attempts of firemen to force an entrance, and it was a long time before the doors were forced. When they were opened the men were loath to enter, in fear of the loosening of the floors and the falling of the safes (of which there were twenty-nine in the building). For four hours or more the flames were fierce, making a complete wreck of the building, and causing a loss of over a million and a half of dollars, not allowing for the probable salvage. The buildings were put up in 1871, and were accounted in popular opinion as fire-proof, though heavy Georgia pine flooring and interior finish gave food to the flames. Architecturally there is no great loss in the destroyed building, which was noteworthy mainly on account of the careful and artistic manner in which the façade was painted in neutral tints, in place of the usual expressionless white paint. It is to be rebuilt at once.

Another event of the week has been the fatal panic in St. Francis Xavier's Church, by which seven lives were sacrificed. There was a " women's mission " in progress, and on Thursday eve last the body and galleries of the church were packed with women and children ; a sermon on " Hell " was in progress, when suddenly shrieks broke from an hysterical woman in the western gallery. There was a slight commotion, when a boy's voice cried out " Fire." A rush for exit was made, especially from the western gallery. There was a wide stairway leading to the front lobby, from which three wide doors led to the street without. In the elbow of the stairway a jam occurred, a stout woman fell, and over her prostrate body the throng rushed. In the body of the church there was crying and fainting, but the voices of the priests were heard and the rush stayed to a certain extent. When the police had cleared the scene of the tumult, seven dead bodies were stretched on the stone floor of the lobby, — six women and one boy, suffocated to death. There was no damage to the edifice, and no persons wounded to any great extent. The building was liberally provided with means of exit : hence it would seem that loss of life in such cases is beyond control, and only by a general individual self-control can these destructive rushes be prevented.

Last of the disasters in its possible effects on building-matters is the work of the Albany legislators on our building-law. Every year brings uncertainty to the minds of the architects and builders of this city, when the Albany statesmen begin their tinkering-operations on the law. The main aim seems to be the possession of the patronage attached to the building-department.

The bill sent up from the Chapter here is almost lost in the turmoil of politics. Another general bill for the government of the city provides for a bureau under a single head to be called the City Architect, to be charged with the construction and repair of every building erected in the city at the expense of the Treasury, including all schools, all buildings of the Park Department, all buildings of the Department of Charities and Correction, the Third District Court-House, and the new court-house, and also the repairs of all buildings erected through this bureau. It will also have the care of all public buildings belonging to or leased by the city, not under the charge of any department (like prisons, armories, drill-rooms, etc.), or in the care of the Board of Education, or in that of any public institution. This does away with the system of employing three or four architects by the different departments heretofore in vogue. Were this to go into effect, it would leave the completion of the Third District Court-House to other hands than those of Withers, take from Mr. L. Eidlitz the extension of the Tweed Court-House, leave schoolhouses free from the conventionality of their present engineer-architect, and generally create a great municipal *atelier*, with its possibilities of corruption and scandal, merely to do work now accomplished by a division of labor among various members of the profession. There is no aim towards economy nor a desire to bring out better artistic results in the proposed change.

JOURNEY OF AN ARCHITECT IN THE NORTH-WEST OF EUROPE.[1] — VII.

FIG. 112 represents the ground-plan of a small mansion, the arrangement of which, we must say, is open to criticism.[2] We enter directly from a rather narrow vestibule into a large drawing-room adjoining a smaller one; the door of the dining-room is opposite to that which leads from the passage forming the carriage-entrance. The vestibule is too small, and the visitor and the friends who receive him are crowded into too little a space; but the internal decorations of the drawing-rooms amply deserve the praise which we have already given. The dining-room is separated from the large drawing-room, and that again from the smaller one, by wide openings (fig. 113), which can be closed by thick leathern hangings. The framework of these openings tends to lessen the apparent height of the

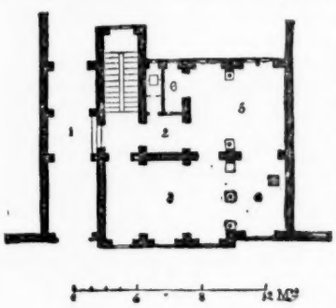


Fig. 112.

1. Passage to carriage entrance. 2. Antechamber. 3. Drawing-room. 4. Back drawing-room. 5. Dining-room. 6. Morning-room.

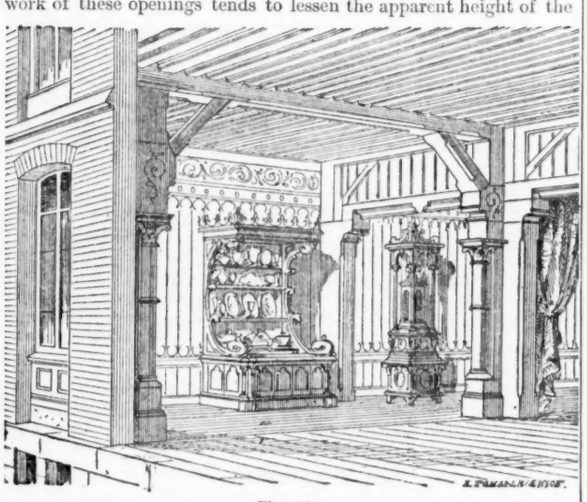


Fig. 113.

apartments; and in the dining-room supports a partition wall. The whole of this combination is in oak; some parts are decorated and enriched with very brightly colored designs. The ceiling is oak, formed of small bare beams with chamfered edges. The long intermediate panels are painted of a uniform tint, with a few stripes of another color. The pilasters have chamfered edges; and above the fillet which divides them midway, they are ornamented with designs in trellis-work.

The large stove which warms the drawing-rooms is made of enamelled terra-cotta, the colors of which, however bright they

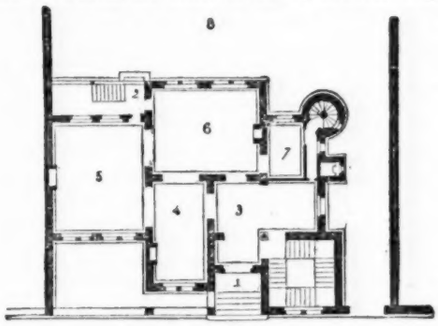


Fig. 115.

1. Porch. 2. Garden entrance. 3. Hall. 4. Small drawing-room. 5. Drawing-room. 6. Dining-room. 7. Library. 8. Garden.

may be, are a poor substitute for the cheerful blaze which the eye looks for in vain during the long winter evenings. Terra-cotta is much used in Germany; and this manufacture has been brought to to great perfection in that country.

We give in fig. 115 the ground-plan, and in fig. 116 that of the first floor of a mansion more important than the preceding. In Paris it would perhaps be considered only a private house; but here it occupies a much higher rank.

Carriages do not enter under a covered way, which is, especially in the North, an unfortunate omission. It is true that a projection of the gable shelters the steps and protects visitors. The front wall is separated from the public way by an area, in which is the kitchen entrance; the servants and tradespeople do not cross the threshold of the principal door, which is covered by a projecting porch. The hall is divided into two unequal parts; the largest of these serves as an ante-room, and is of sufficient size to be used as a cloak-room, and to contain benches for servants while they wait

Fig. 116.

1. Antechamber. 2. Bedrooms. 3. Dressing-rooms.

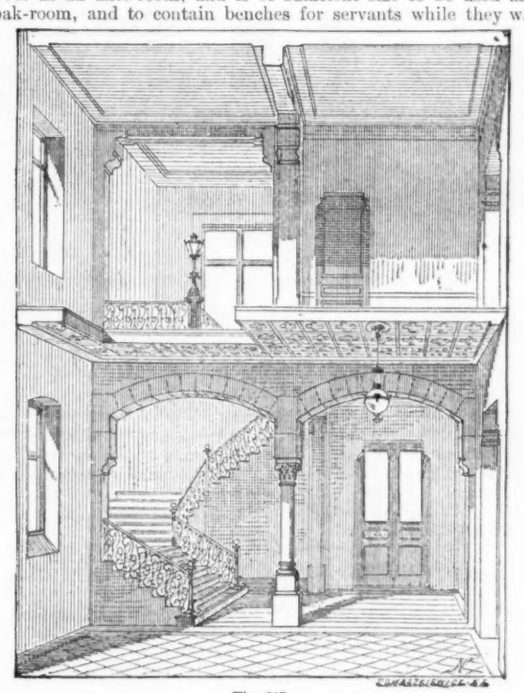


Fig. 117.

for their masters. An isolated column, which indicates the point of separation of these two portions, as shown in fig. 117, gives an

[1] Printed by permission from the advance sheets of a Journey of an Architect in the North-west of Europe. Translated from the French of M. Félix Narjoux. James R. Osgood & Co., Publishers.

[2] See, for further details, *Habitations Modernes en Europe*, par MM. Viollet-le-Duc et Félix Narjoux, architectes. Librairie Morel, 13 Rue Bonaparte, Paris.

air of elegance to the hall; and this simple arrangement enables one to understand the construction of the staircase. The kitchen and its dependent offices are connected with the ground-floor by a spiral staircase in a turret, which is approached by a wide passage leading to the closets. We must not forget that the servants in Germany are not entirely separated from their masters, but live more with the family than is the case with us; and the mistress of a house on the other side of the Rhine does not consider it derogatory to go occasionally to superintend the kitchen department. On the first floor is a large ante-chamber where the children can play. Then there are very large and lofty bedrooms, each with its dressing-room fitted with hot and cold water, a large bath and shower-bath — the latter an English fashion.

We must here notice the manner in which the beds are placed. There is no recess, but the bed stands with one of its shorter sides against the wall, so that it projects into the room and leaves both of its longer sides exposed. This arrangement, when the size of the room will permit, is the most convenient and the most healthful, and is especially useful in cases of sickness. It is always employed in large state bedrooms in palaces, and was constantly found in those of the middle ages. The want of space is the only

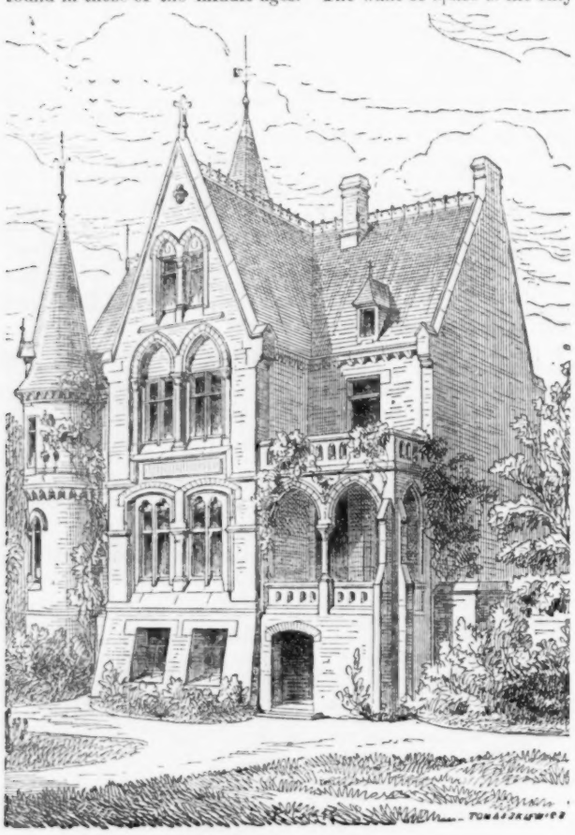


Fig. 119.

reason which can induce people to prefer the position now commonly adopted.

The façade (fig. 119) resembles those which we have already seen. There is too much variety in it, and it has not a quiet appearance; but the principal parts of the structure are well indicated. The spiral staircase, as well as the drawing-rooms and vestibules, project externally; large double windows give light to the principal apartments, and, contrary to the laws of symmetry, lesser ones open into the smaller and secondary rooms. Imbricated work plays an important part in the decoration of these façades, to which both recessed and projecting arches give a varied outline. Terraces and covered balconies render the interior of the house more agreeable, and allow sedentary inhabitants frequently to take a little exercise.

NOTES AND CLIPPINGS.

A CURIOUS EXPLOSION. — A curious accident that lately occurred shows that even a water-tank must be as carefully approached with an unprotected light as a leaky gas-main on a powder-magazine. A workman on board H. M. torpedo-ship "Vesuvius" approached an iron water-tank with a candle, when the hydrogen gas that had been liberated by the galvanic action which had very likely been established between the zinc coating of the galvanized iron and the edges where in fitting the sides together the ungalvanized iron was exposed, exploded with such violence as to tear out the side of the tank.

THE INDIANA CAPITOL. — The walls of the Indiana Senate Chamber in Indianapolis suddenly settled with a loud crack a few days ago while the Senate was in session. Everybody rushed out without waiting for the formality of an adjournment, and it was some time before business could be resumed.

A NEW METHOD OF FIRE-PROOF CONSTRUCTION. — We recollect that at the Convention of the Institute held at Boston just after the first great fire at Chicago, the members discussed at much length the best methods of fire-proofing buildings. One method that was discussed and received much approval was that of using for the supports of fire-proof floors large wooden beams coated with plaster. We do not know whether this method has been adopted to any great extent in this country. An English firm, Messrs. Evans and Swain, have lately patented a fire-proof floor which is constructed on this principle. Joists 2″ x 11″ resting for a suitable distance upon the walls are placed side by side and closely bolted together so that there is no intervening space. The outer joists also rest on the walls. The floor is thus nothing but a solid slab of wood, which would be affected by a fire above or below it by being charred to the depth of an inch or so, as is the way usually with solid beams exposed to fire. But in order to protect it even from this slight damage, dovetail slots are traversed across the under side of the floor, and so spaced as to give a good key for plastering. The upper surface is protected by a layer of cement concrete, which is laid upon a thin layer of sand or loam in order that it may not be cracked by the inevitable shrinking of the timber. The questionable things about this invention are its cost, which is likely to be so near that of other things as to hinder its introduction, and the facility it affords for dry-rot, which would be pretty sure, we should think, to invade such a floor in no great time.

THE PARIS EXHIBITION. — All the stone and sand needed for the exhibition building are taken from pits and quarries opened for that purpose on the spot. Between seven and eight hundred cubic yards of masonry are laid each day, in laying which about sixteen hundred bags of Portland cement are used, which is mixed with sand in twenty-five mills.

PORTLAND CEMENT. — Mr. I. J. Mann, assistant engineer, Port and Docks Office, Dublin, has made experiments upon the qualities of Portland cement, which prove that coarsely ground cement when used neat (i.e., without sand) is stronger than finely ground cement; but when used with sand, as in concrete and mortar, it was found that cement containing only twenty-five per cent of coarse cement particles had but half the strength of mortar mixed with fine cement, the cement used being in each case four weeks old. On the other hand, extremely fine sand diminished the strength of the mortar to less than one-half of that which was mixed with coarse sand.

COMPARATIVE HEALTH OF CITIES. — The Health Bureau of the German empire reports that during the week ending on the 27th of January last, the number of deaths to every hundred thousand of the inhabitants in the cities enumerated were as follows: —

Berlin	42	Copenhagen	58
Cologne	52	Stockholm	55
Magdeburg	56	Christiana	45
Strasburg	76	Warsaw	28
Munich	60	Naples	61
Augsburg	89	Turin	43
Dresden	38	Bucharest	59
Leipzig	34	London	40
Brunswick	41	Liverpool	55
Hamburg	48	Glasgow	49
Vienna	52	Dublin	58
Pesth	81	Edinburgh	41
Prague	95	Alexandria, Egypt	85
Amsterdam	56	Madras	121
Rotterdam	51	Bombay	65
The Hague	44	New York	47
Basle	65	Philadelphia	32
Brussels	49	Boston	37
Paris	53	San Francisco	58

JAPANESE ARCHÆOLOGY. — It is said that a Japanese antiquarian has discovered records of a diplomatic mission sent from Japan to Rome during the seventeenth century, — a fact that is of interest to us, as the expedition crossed the American Continent. If the records of the journey made by such keen observers are at all full, they may throw light on the state of civilization then existing in Mexico, where thus crossed. There are doubtless among the archives of the Japanese, records of inestimable interest and value to the historian and antiquary, and we trust that this reported "find" is but the forerunner of a series of valuable disclosures.

SAWDUST IN ROUGH-CASTING. — Siehr recommends very highly the use of sawdust in mortar, as superior even to hair for the prevention of cracking, and subsequent peeling off, of rough-casting under the action of storms and frost. His own house, exposed to prolonged storms on the seacoast, had patches of mortar to be renewed each spring; and, after trying without effect a number of substances to prevent it, he found sawdust perfectly satisfactory. It was first thoroughly dried, and sifted through an ordinary grain-sieve, to remove the larger particles. The mortar was made by mixing one part of cement, two of lime, two of sawdust, and five of sharp sand; the sawdust being first well mixed dry with the cement and sand.

CHANGEABLE WALL-PAPERS. — The *Papier-Zeitung* remarks that it would be an advantage if wall-papers could be had which would adapt themselves to the degree of illumination of the room in which they are hung, becoming darker with a greater brightness, and brighter as the darkness increased. The proposal has been made to coat the walls of rooms with oxalate of copper, which becomes dark in light, and bright again in darkness. By combination with other colors, wall-papers might be obtained which would present an agreeable variation of colors.

THE AMERICAN ARCHITECT AND BUILDING NEWS.

(SUPPLEMENT.)

TENTH ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS, HELD AT PHILADELPHIA, PENN., OCT. 11 AND 12, 1876.

REPORTS SUBMITTED TO THE CONVENTION.

REPORT OF THE BOARD OF TRUSTEES.

OCT. 11, 1876.

To the American Institute of Architects.

Your Board of Trustees respectfully report that since the Convention in Baltimore last year they have held fourteen meetings.

They beg to ask your consideration for the two sets of proposed amendments to the By-Laws now before you, representing as they do two of the subjects which have mainly been pressed on the attention of your Board during the year. One of the documents refers to the important topic of finance, the other to its inseparable subject of membership. The amendment offered by the Executive Committee of the Chicago Chapter for a reduction of membership dues — and which you will presently find enlarged upon in the Annual Report of that Chapter — has been mooted in other Chapters as well, and particularly in that of Boston; and it was with a view to elucidating the question that your Board at the last Convention recommended the formation of a Special Committee of Inspection. The suggestion was adopted by the Institute; and such a committee, enlarged into one of advice as well as of investigation, was appointed, with instructions to report by circular to the professional members of the Institute. That committee has not, however, found it possible as yet to do so, but will doubtless materially assist your deliberations in the convention now opened. Your Board suggests as their contribution to the discussion which is likely to arise on the foundational subject of ways and means, that a large saving in annual expenses may be effected by dispensing with the annual proceedings of the Conventions in their present form, and by handing over the materials to the editor of the organ of the Institute, the *American Architect and Building News*, for publication. Another step in the direction of economy has been practised by the Committee of Arrangements of this Convention, at the suggestion of the Chapter under whose auspices we now meet; and that is in foregoing the usual annual dinner and lunches. And the same Chapter in a recent communication to your Board records a resolution adopted by it which recommends that the granting of any appropriation for this purpose be abolished altogether. Whether with or without the reduction of dues, there is the more reason to take seriously to heart the question of legitimate modes for lessening expenses, inasmuch as there is necessarily a constant increase in the drain upon the treasury to meet the current outlays of the administration of the Institute. Some idea of the work done in the course of this administration may be found in the fact that during the eleven (11) months that have elapsed since the last Convention, as shown by the Secretary's press copy book, he has written two hundred and seventy (270) letters, either in autograph or in draught for the use of the copyist, about fifty (50) of them being from two (2) to half a dozen pages long. These do not include notices of meetings, transcripts of minutes, or notes on minor current business. Of such no copies are kept. If duplicates are added, the figures reach to eight hundred and thirty-seven (837) letters.

The question of finance and of membership are under many aspects interchangeable; and the proposition for such a change in the By-Laws as should add to the existing power of the Trustees to elect Associates, that of electing Fellows as well, is submitted to you by your Board, not with any personal desire to increase its authority, but with a view to eliciting the enlightenment and instructions they hope to have from you during this Convention. The minutes of the transactions of your Board, since the last Convention, are to an unusual degree occupied with questions relating to membership. The action of your Board and your Secretary in the matters of nominating, issuing ballots for, and admitting members, as well as in rejecting applications or in defining the By-Laws on the subject of candidateship, has been questioned and criticised by members of the Institute. Questions of the status of old members of the Institute in relation to the Chapters in their locality — brought to your attention at your last Convention by the Baltimore Chapter — have since constantly been laid before your Board. In consequence of the pressure your Board has felt in relation to the points indicated, it passed some time since a resolution that the question of the status within the Institute of parties whose relations to the Institute appear to involve anomalous conditions as regards the Chapters in their localities, or otherwise, be referred to the next (that is the present) Convention.

Your Secretary has been and is in correspondence with architects in several important centres of the Union, with a view to the formation of Chapters; in one case the application for the admission of more than the necessary number of Fellows having been made. But fruition is delayed until a harmony of different interests as to finance and membership can be established. The solving of the problems presented to your Board will largely depend on the light you may throw on these vexed questions in the course of this Convention, and on the understanding which your Board may derive as to the liberty to be allowed to it in the matter of the application of the By-Laws under the various exigencies presented to it by the widely varying conditions of our extensive territory.

So far during the current fiscal year, the membership has been increased by four (4) Fellows, ten (10) Associates, two (2) Honorary and two (2) Corresponding members, while one (1) Fellow, having abandoned the profession of architecture for that of engineering, has resigned. One (1) Associate, an engineer, has been transferred to Corresponding Membership; and one (1) Associate, Mr. Edwin L. Howland, just previously elected a practising member of the Rhode Island Chapter has died — on intelligence of which your Board transmitted a resolution of condolence to his Chapter.

At our last Convention the draught of a formula for a general building-contract presented by your Board was discussed at much length; a number of amendments were offered, and the matter was referred back to your Board, who intrusted the subject to the consideration of a special committee of one, Mr. Haight, with instructions to report on it. In due time he reported that the suggestions received from the different Chapters had been carefully examined, that in large part they had been adopted, and with the assistance of counsel the original draught of contract had been revised and was presented for adoption. Mr. Haight's report and accompanying draught were accepted, and will be laid before you in the course of this Convention.

A case involving questions of interest to architectural practitioners — that of the New York State Capitol — has been brought to the attention of your Board, but was referred by it to the New York Chapter. After action by that Chapter, documents connected with the case were referred, as being of general and not merely local interest, to the Institute, including indorsements of the action of the New York Chapter by the Chicago, Philadelphia, and Rhode Island Chapters, and commendatory letters from Lord Monk, Governor-General of Canada, and other officials, giving the facts of the connection of Mr. Thomas Fuller, the architect of the New York Capitol, with the Government Buildings of the Dominion.

Some two months since, your Board received a communication from Mr. W. P. P. Longfellow, suggesting that they take some action on the part of the Institute in the way of protesting against the completion of the Washington Monument at the capital according to its present designs; but as the Government simultaneously took action on the subject by referring it to a commission, your Board found no opportunity to attempt any thing in the matter.

Your Board has been requested by the Baltimore Chapter, under a resolution of that body, to have all the papers read at the annual conventions published and distributed to the members of the Institute. So far as the question involves literary points of interest to the profession, your Board necessarily left the subject to the Committee on Publications; but as regards the point of expenditure, the action of the Baltimore Chapter was referred by your Board to this Convention.

Your Secretary has been authorized to furnish to the editor of the *American Architect and Building News*, copies of the minutes of your Board and other documents in his discretion.

The American Society of Civil Engineers invited members of the Institute to participate in its recent annual meeting, and to use its rooms and appliances at Philadelphia during the Centennial Exhibition. Your Board expressed the thanks of the Institute to your sister society for its courteous invitation, and your Secretary transmitted it to each professional member of the Institute.

Your Board issued communications to each Chapter, suggesting its participation in the Centennial Exhibition by a display of illustrations of the professional works of its members. The response was not so general as might reasonably have been hoped for. As far as your Board has been informed, only two of the Chapters, those in Boston and New York, acted collectively and officially in the matter.

The Austrian Society of Engineers and Architects in Vienna have profferred to the Institute — as a sign of professional consideration and international friendship — a collection of drawings, plans, and photographs representing inventions, works, or buildings projected or executed by members of their Society. The offer was cordially accepted by the Board on behalf of the Institute; and the correspondence on the subject was referred to the Secretary for Foreign Correspondence, Mr. Van Brunt.

A question having been put by a member of the Institute temporarily engaged as agent for an industry connected with building-operations, your Board, after discussions on the subject in its different bearings, passed a resolution that they see no impropriety in an architect accepting an agency, provided his clients are informed of the fact, if his agency should cover any material under discussion for use in their premises; and your Secretary was instructed to transmit the resolution to the inquirer, which was done.

The efforts made by the Board toward the establishment of a proper architectural service for the National Government, and which in the shape of a bill to be presented to Congress engaged your attention at the last Convention, have so far been without public result. The bill, after many amendments by committee to whom it was referred, was presented to and acted upon by Congress, and referred to the House Committee on Public Buildings and Grounds, where it has since rested along with another bill of the same nature presented by the then Supervising Architect of the Treasury Department.

Respectfully submitted.

Board of Trustees.

RICHARD UPJOHN, *President*,
R. M. HUNT, *Vice-President*,
THOS. U. WALTER, "
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REPORT OF THE COMMITTEE ON PUBLICATIONS.

Oct. 10, 1876.

To the American Institute of Architects.

Your Committee on Publications for the year 1876, comprising Messrs. Littell, Bloor, Holly, Pfeiffer, and Hunt, respectfully report that they have held four (4) meetings since the last Convention, and have had the proceedings edited and published in the usual pamphlet form, but with less matter and consequently with less outlay than previously; such portions as were omitted having been referred with power to the editor of the *American Architect and Building News*.

Your Committee have no knowledge of the financial status and prospects of that periodical, on which of course its permanence will depend; but they regard its literary success as established, while its illustrations on the whole are not below what might be expected. If, therefore, it should be discovered on inquiry, that its commercial success is reasonably assured, your Committee would recommend that the publication of an annual pamphlet by this Institute be discontinued, and that the proceedings of the Annual Conventions, under such restrictions and guaranties as may appear proper to your Committee, be handed over to the editor of the *American Architect and Building News* for publication.

Your Committee respectfully invite the consideration of the Institute to the subject. As the *American Architect and Building News* is the adopted organ of the Institute, your Committee suggest that it might be valuable to have an expression of the understanding of the Convention as to how far the serial is to be considered its mouthpiece.

(*Last Paragraph of the above as amended in Convention.*)

Your Committee respectfully invite the consideration of the Institute to this subject. As the *American Architect and Building News* is the medium of publication of the Institute, your Committee suggest that it might be valuable to have an expression of the understanding of the Convention as to how extensively the proceedings of the Convention should be published therein.

REPORT OF THE NEW YORK CHAPTER.

NEW YORK, Oct. 10, 1876.

To the American Institute of Architects.

The New York Chapter respectfully submits the following report: —

During the official year of 1875–6 it has held eight (8) regular and four (4) special business meetings, with the usual social meetings between the regular business ones.

The Chapter took pains early in the year to present illustrations of the works of its members at the Centennial Exhibition. The result was achieved by a special committee, and in conjunction with the works of other members of the Institute is before you in one of the rooms of the Annex of the Art Department.

The subject of a controversy between the architect of the New York State Capitol now in progress of erection, and the so-called Advisory Board of Architects engaged by the State authorities to revise the said architect's plans, having been laid before the Chapter, a committee consisting of Messrs. Post, Dudley, and Robertson was appointed to report on the case. They did so in the form of a memorial to the State Legislature, which after some amendments was adopted by the Chapter, and in its finished form is hereto appended. The original was forwarded to the Albany Chapter for transmission to the State Senate, where, and afterwards in committee, it was debated. The document was widely published, and it was officially indorsed by the Chicago, Philadelphia, and Rhode Island Chapters. Mr. Fuller, the architect of the Capitol as well as of the well-known Gothic structures constituting the Government Buildings of Canada, forwarded to the Secretary copies of letters from the Governor-General, the Government Engineer, and the Speaker of the Senate of the Dominion, stating that Mr. Fuller had designed and supervised these buildings to their close and to the great satisfaction of the authorities. These and other documents, being of interest to the profession at large, were transferred by the Chapter to the Institute.

Propositions have been made to the Chapter looking toward the establishment of a Board of Concilation or

Arbitration, composed of disinterested building-experts, in the matter of disputes arising from and connected with building-operations; and a statement expressing the desire of the signators for the establishment of such a board has been printed, and signed by fifty-four (54) architects of New York City. So far as the co-operation of the Chapter is concerned, the question has been laid on the table.

The Chapter had appointed a special committee to consider what provisions should be introduced into the building-law of the city of New York with reference to public health.

The subject of the introduction of the metric system into current practice having been presented to the Chapter by a committee of engineers in Boston, the subject was referred to a committee of one, Mr. Haight, who reported that in view of the public discussion on this subject, it is not desirable for the New York Chapter A. I. A. at the present time to take any definite action in the matter.

The attention of the Chapter having been called to certain articles in the *American Architect and Building News* in relation to the Congressional bills draughted by the Institute and the Supervising Architect of the Treasury Department, looking toward the regulation of the architectural service of the General Government, the following resolution was passed by the Chapter, and transmitted to the periodical mentioned: to wit, —

"*Resolved*, That the New York Chapter A. I. A. reaffirms the views expressed in the Fifth Annual Convention on the Institute held in Boston in 1871; viz., —

"'That the architect and author of the design of any proposed work should retain the supreme control and general supervision of the execution of the work.'"

The Chapter has presented to the Metropolitan Museum of Art, in New York, a collection of Central American pottery, &c., which it acquired by donation before the establishment of the Museum.

Mr. A. F. Oakey, practising member of the Chapter, read at one of its earlier meetings, an original paper on Acoustics, which was published in the *American Architect*.

Through the management of Mr. H. H. Holly, practising member, an interesting series of photographs illustrating recent work in England has been added at a nominal cost, to the collection of the Chapter by its Library Committee.

The Committee on Examinations of the Chapter has during the year, in conjunction with the Building Department, surveyed and reported on twenty-seven (27) buildings averred to be unsafe.

A list of the present members of the Chapter is hereto appended, together with one of the officers and standing committees elected at the annual meeting on the 3d inst.

Respectfully submitted.

A. J. BLOOR.
Secretary of the New York Chapter A. I. A.

REPORT OF THE CHICAGO CHAPTER.

SECRETARY'S OFFICE OF THE CHICAGO CHAPTER A.I.A.
90 LASALLE ST., CHICAGO, Oct. 2, 1876.

To the American Institute of Architects.

The Chicago Chapter respectfully submits its Annual Report for the year ending Oct. 2, 1876.

During the past year thirteen meetings have been held, and subjects of interest have been introduced, papers have been read, and discussions have ensued, which have made our meetings of value to the members in attendance.

Our Chapter has obtained a standing, and a recognition from the public, and its opinion has been sought by those interested in and connected with building-problems requiring an opinion and a solution. Subjects of construction, as well as the honorable practice of the profession, have been among the questions submitted.

The Chapter at a special meeting held Tuesday, Nov. 30, 1875, made amendments to its By-Laws relating to the annual contributions of its members.

The dues were reduced from forty and thirty dollars to twenty-five and fifteen dollars respectively for Fellows and Associates of the Institute, the Institute dues being included, thereby reducing the amount actually paid to the Chapter by each member per year to five dollars.

It is in this connection that the Chicago Chapter wishes to lay before the Institute the subject of the reduction of the Institute dues for their consideration, and desires some action tending to a reduction.

We find it a serious obstacle to our progress and strength, both in the loss of members, and the reluctance on the part of others to join us.

The Chapters forming the Institute without doubt prize their national confederation: yet each individual Chapter has its own work to perform, and must draw from its own members the vigor and strength requisite to a successful existence.

Chicago, next to New York, contains more architects than any other city in the Union: yet our Chapter is among the smallest of the Institute. There are numbers of young and promising architects in the city who could bring in with them a certain life and activity sadly needed in our Chapter; yet these hold aloof in consequence of the illy proportioned dues, which in their judgment they find it hard to harmonize with their available funds.

This is also the case with some of the older members of the profession, who would be induced to join the Chapter were not the payments objectionable to them.

We regret to report that we have already lost a few worthy members for no other reason than that named, and it is not unlikely our ranks will be still more reduced unless some amendment be passed.

We find upon examination of the Institute roll, that there are a few who are Fellows of the Institute yet are not members of any Chapter. We would suggest that if the reduction of the Institute dues be favorably considered, the dues of such members be left undisturbed, — still giving them the privilege of the reduction provided they become members of a Chapter, accordingly assisting in its support.

We have one member residing in an adjoining city, who has nobly stood by us though receiving no direct benefits from our meetings; and could we be favored with a reduction of the Institute charges, we have the material about us to form an active association, which when stronger in numbers will increase rather than diminish the amount now paid to the Institute.

We present this subject as one of importance, not only to our Chapter but to others of the Institute, and respectfully suggest its due consideration at the present Convention.

I have the honor to be respectfully

HENRY L. GAY,
Secretary of the Chicago Chapter A. I. A.

REPORT OF THE BALTIMORE CHAPTER.

BALTIMORE, October, 1876.

A. J. BLOOR, ESQ., *Secretary American Institute of Architects, New York City.*

Sir, — I have the honor to present to you the Annual Report of the Baltimore Chapter.

The regular meetings have been held, but poorly attended. Several interesting papers have been read during the year. The question of printing papers read before the Institute with the Annual Report was discussed, and a resolution to that effect was sent to the Board of Trustees requesting that this be done in the future. The committee on a proposed building-law for the city of Baltimore reported one which was presented to the City Council for action, and has been referred to a committee who have as yet made no report.

We have lost by resignation one of our most useful members, Mr. N. H. Hutton, Fellow, who was one of the founders of the Chapter, and at the time of his resignation, President.

Two members (Associates) have been added, — Messrs. J. B. Noel Wyatt and J. E. Sperry.

Very respectfully,
JOHN MURDOCH,
Secretary of the Baltimore Chapter A. I. A.

REPORT OF THE PHILADELPHIA CHAPTER.

PHILADELPHIA, Oct. 9, 1876.

As Secretary of the Chapter, it becomes my duty in accordance with the fourth section of Article XI. of the By-Laws to submit a report of our proceedings during the past year.

Our meetings have been regularly held fortnightly, except during the summer vacation; but no papers of importance have been presented. The intercourse of the

members with each other at the meetings has tended to promote a confraternity of feeling throughout the Chapter, and in that way our profession has been measurably benefited.

Our membership is comparatively small, and, all being actively engaged in practice, it is difficult to maintain a very high degree of enthusiasm; we nevertheless find time and heart to keep up a working organization.

We take pleasure in welcoming the Convention to our city and our hospitalities. Our Chapter rooms are at all times at your service; and the Centennial Exposition offers attractions such as you will not find again in an American city for another hundred years.

All of which is respectfully submitted.

ALONZO B. JONES,
Secretary of the Philadelphia Chapter A. I. A.

REPORT OF THE RHODE ISLAND CHAPTER.

PROVIDENCE, October, 1876.

To the American Institute of Architects.

The Rhode Island Chapter respectfully submits its First Annual Report.

The Chapter was organized Nov. 10, 1875, and has since held sixteen meetings. After the necessary work of organization was completed, a rule was adopted that each member in alphabetical succession should present a topic for discussion. Under this system, the following subjects have been considered, either by formal papers or by oral discussion: —

I. The proper methods of obtaining bids, and awarding contracts.

II. The utility of a Mechanics' Exchange.

III. Notes of personal observation in Pompeii.

IV. The effect of concussion and vibration on artificial stone.

The Chapter engaged heartily in the movement for the introduction of the metric system into general use, but found the opposition to it so formidable that it was determined to await a more favorable opportunity for positive action.

By invitation of the City Government, the Chapter has commenced the preparation of a building-law for the city of Providence, which it is hoped will be ready for adoption by the proper authorities early this winter. As various circumstances have directed public attention to the utter inadequacy of the present law, as well as to the non-existence of any special means for enforcing even its meagre provisions, the requirements of which are openly disregarded in the heart of the city, it is possible that the proposed law may be passed without much difficulty; but however this may be, the Chapter intends to do its part, and if not rewarded with immediate success, will continue to urge the matter until a proper law is enacted and enforced.

The Chapter was formed with six members. It has admitted during the past year five professional and two junior members. It has lost one, Mr. Edwin L. Howland, who was removed by death on the 28th of June, at the age of thirty-eight. Mr. Howland was a man of sterling integrity, heartily devoted to his profession, and giving promise of attaining much distinction in it. Associated during the greater part of his professional life with others, his works since he began practice as a principal have been marked by a great increase in power of design and refinement of taste, until the latest of them, the Harrison-street Church and the Wilcox Building in Providence, and others, deserve to rank among the best works of this generation.

Mr. Howland has left a large number of churches, business buildings, and dwellings to testify to his ability; and in him the Chapter loses an efficient member, and the profession an upright and honorable practitioner.

The Chapter begins the new year in a sound financial condition, and encouraging prospects of influence and usefulness.

Respectfully submitted.

CHARLES P. HARTSHORN,
Secretary of the Rhode Island Chapter.

REPORT OF THE BOSTON CHAPTER.

BOSTON, Oct. 10, 1876.

To the American Institute of Architects.

The undersigned has the honor to present his annual report as Secretary of the Boston Chapter.

The monthly meetings of the Chapter have been held with the usual regularity on the evenings of the first Friday of each month from October to June, generally in the architectural rooms of the Institute of Technology. At the first meeting in October no quorum was present; at the other meetings, the attendance varied from nine to twenty-one. The activity of the previous year has perhaps not been quite sustained, but there has yet been no lack of interest at the meetings. Besides the ordinary local business of the Society, there have come up from time to time subjects of broader interest, provoking more animated discussions: such for instance as the conflicting action of the Institute and one of its Chapters, respecting the election as a Fellow of the Institute of a previous member of the Chapter, who had for cause been dropped from the Chapter rolls; the desirability of adopting the metric system of weights and measures; the subject of the money contributions of the Chapters to the central treasury; the representation of the work of the Society at the Centennial Exhibition; the controversy between the architect of the State Capitol at Albany and the Advisory Board; and other topics of similar interest.

These however were casual and occasional topics suggested by the events of the day in the life of the profession. It was felt as in previous years that our meetings should be marked by some more regular and prepared work which should justify us in feeling that the Society had not merely a formal existence, but that it was capable of exercising an active educational influence, first on its own members, second on those students and draughtsmen within its reach, and third to some extent on the public. Accordingly the Committee on Providing Business and Entertainment reported early in the year a scheme for a series of discussions at the meetings on subjects connected with the practical or constructive part of the profession, — such as Foundations, Masonry, Framing, Roofing, Steam-heating, Plumbing, and the like, — and also for a series of lectures of an informal character to be delivered in some public place to students and others interested, on the architecture of the Renaissance in France, England, Italy, and possibly in Germany and Spain. It was found impracticable to complete the arrangements for this course of lectures in time to commence them during the past season, and they were deferred to the present; and for the series of discussions mentioned above, another series was substituted, which promised not less the improvement of the members.

The instances in which one architect gets from another any thing like a full and frank criticism of any work which he has done are, as everybody knows, extremely rare. And yet this is the only criticism which he is likely to value or regard. Our complaisance generally gets the better of our frankness, and we tell each other any number of white lies, or black ones, rather than risk the hurting of that sensitiveness which we are believed to share with all those who follow art in any of its branches. It was believed by our Committee that this timidity, which all will admit to be the opposite of respectable, was capable of being overcome, and that at least once a month, in open meeting, with the moral support of his fellows about him, a man might be got to say honestly what he thought of his neighbor's work. Our Committee therefore proposed that at each meeting of the Society, some prominent building, designed by one of its members, should be set up for examination and criticism; that the building to be discussed should be announced at the previous meeting, with the names of two members who were to open the discussion; and that a full, free, and frank expression of opinion should be expected on all points of design and construction, be they good or bad.

The proposal was received with mingled feelings of approbation of the idea, and misgivings as to the result. There was, I believe, no one who did not gladly admit that such criticism as that proposed was precisely what is needed by all architects, whose work is done in solitude, without the stimulus of contact with fresh minds, and with an ever-growing tendency to run in narrow ruts of habit. But there was much fear in the minds of some, that the frank criticism would be relished by the recipient only so long as it approved and praised, and that when it began to condemn, we should find mortification and injured vanity and hard feeling spring up and grow apace, to the destruction of all our cher-

ished good feeling and harmony. The plan was however tried, and persisted in to the end of the season. Four recent buildings were discussed and fully discussed, — the new church of the Old South Society, the Alumni Hall at Cambridge, the Town Hall at Brookline, and the Museum of Fine Arts. In none of these cases did either the introduction or the following discussion take the form of unmixed praise; in some of them the criticism was pretty sweeping and radical, but I think I shall be sustained in saying that in no case was there even so much as a momentary disturbance of good feeling. I will not say that in all cases the utmost was urged that might be urged in disapproval. Doubtless the tendency was to soften the expression of adverse criticism a shade or two. But when this allowance is made, the plan must be said to have worked well, and it will undoubtedly be continued in the meetings of the present season.

The course of informal lectures by members of the Society, referred to in my last report as having been delivered before members and others in the spring of 1875, were repeated during the months of March and April of the present year at Worcester, Mass., by invitation of the Mechanics' Institute of that place, and were attended by large and apparently interested audiences.

Four new members have been elected during the present year; viz., Mr. G. A. Clough, Mr. H. M. Stephenson, Mr. W. J. Paine, and Mr. H. P. Clarke.

The list of members accompanies this report, which is respectfully submitted by,

CHARLES A. CUMMINGS,
Secretary of the Boston Chapter A. I. A.

REPORT OF THE SECRETARY FOR FOREIGN CORRESPONDENCE.

BOSTON, Oct. 7, 1876.

To the American Institute of Architects.

The papers of the late Secretary for Foreign Correspondence of the Institute came into the possession of the present incumbent of that office too late to enable him to carry on his functions with the necessary degree of activity and intelligence. This delay is to be the more regretted, because he has thereby been prevented from properly availing himself of the opportunity afforded by the Centennial of duly offering to our foreign correspondents such formal hospitalities as the great occasion would seem to demand.

The letters lately received by him moreover contain sufficient expressions of congratulation and professional sympathy from our brethren in other lands to give assurance that such official tenders as he might have been able to make have been scarcely needed to render our affiliation with them complete and cordial.

Your Secretary for Foreign Correspondence has caused to be engrossed and forwarded to the Austrian Society of Engineers and Architects a formal acceptance of its generous gift to the Institute of the interesting and instructive collection of drawings and photographs which illustrate in this international exposition the latest works of engineering and architecture in that country. The letter of the Austrian Society was an expression of good feeling which we were prompt to reciprocate.

Among the most interesting papers received by us have been those of our active correspondent, the Chevalier da Silva, of the Society of Portuguese Architects. In them he reports the results of the archæological investigations carried on under his efficient direction, and takes occasion also to ask our sympathy for the efforts to establish a school of art in Portugal, and to direct attention to the exhibition of its works at Philadelphia.

At the opening of the year the usual exchange of official congratulations took place between the representatives of the principal foreign architectural societies and ourselves.

In furtherance of this system of professional reciprocity and to promote the sentiment of mutual regard, it is to be hoped that the members of the Institute who are about to travel abroad will, as in several instances heretofore, through letters of credence or introduction from the Secretary of Foreign Correspondence, put themselves in personal communication with our foreign brethren. By this means and by that active correspondence and interchange of good offices which should be maintained between the Institute and its friends in other lands, we may expect not only to secure for ourselves the obvious advantages to be derived from a better acquaintance, but to present an increasing claim to the interest and sympathy with which the older societies have ever been ready to regard the new conditions under which architecture is developing in this country.

Respectfully submitted.

HENRY VAN BRUNT,
Secretary for Foreign Correspondence.

REPORT OF THE COMMITTEE ON EDUCATION.

(Condensed.)

THE most interesting thing in regard to professional education that has come to the knowledge of your Committee during the last year has been the establishment, under the care of Mr. W. L. B. Jenney of Chicago, of a school of architecture at the University of Michigan. The energy and success with which the older branches of instruction have been administered at Ann Arbor are the best warrant for expecting the best results from this undertaking. But its history, like that of the similar undertaking at Syracuse of which we made mention in our last report, and which is still only in its beginnings, belongs to the future.

Meanwhile the Committee have to report that the State Industrial University at Champaign, Ill., has since the year 1871 maintained a course of instruction in architecture, at present under the charge of Mr. N. C. Ricker, one of its own earlier graduates. The course of instruction extends through four years, and embraces beside the modern languages and the scientific study of construction, modelling in clay and plaster, and architectural drawing and designing, and the study of contracts, specifications, and estimates. A work-shop for practice in model-making is attached to the school. The art-gallery of the university has a remarkably good collection of casts and the beginning of an architectural library.

The course of study at Cornell University, under the care of our Honorary Fellow Mr. Babcock, continues much as in previous years; the marked improvement in the quality of the students, and an increase in the teaching force, giving constantly a better and better tone. As before, no students are received but those who follow the full four-years' course, — a rule which contributes directly to maintain a high intellectual standard, though of course the multiplicity of studies interferes with the more strictly professional work. Designing is practised during the last year, and is pursued with great zeal. The best results are of course obtained from students who have been in architects' offices previous to entering the university; and it is found that the time that can be found for drawing is too short to obtain results of much value from students who have had no previous training; those who come from carpenters' shops, for example, doing excellently in their scientific work, but seldom distinguishing themselves as draughtsmen. The advantages this school possesses in regard to books is still unequalled, and a valuable series of illustrations for lectures is gradually accumulating. But it suffers for lack of other apparatus of every kind. There were last year twenty-nine students, two of whom were young women, in attendance upon the course in architecture; and twenty-eight students from the other departments of the university attended the lectures on ancient architecture or on building-materials and construction.

Of the instruction at the Institute of Technology at Boston there is little to add to what we said two years ago. The work has been steadily improving, partly because things are on a firmer footing, partly because the quality of the students improves. More and more of the students come to the school from offices, to get what offices do not offer, bringing with them the workmanlike habits that an office gives. Every year, too, there is a larger proportion of regular as distinguished from special students; that is, of those who pursue the general scientific and literary culture the Institute offers, instead of confining themselves to a purely professional work. Nearly half the students are now taking the four-years' course. This is a matter for twofold satisfaction. It is better for the profession and for the community that the rising generation should be as well-educated a set of men as possible. It is also better for the young men, for if they succeed in establishing themselves as architects they will by and by need all the culture they

can get. If they do not succeed in this profession, they will need all the resources they can command to gain a footing in some other.

It remains to consider how far this Institute can itself be counted among the agencies of architectural education; what it does and what it might do for the culture of the public, of its own members, and of the young men who are just entering the profession.

Here the record of what has already been successfully accomplished, as it has from time been recited to you in the reports of the several Chapters, is, so far as it goes, the best explanation of what may be done in the future. By establishing courses of lectures, by organizing exhibitions of architectural drawings or of the decorative arts connected with building, and by taking the lead in the foundation of permanent museums either of building-appliances or of the industrial and decorative arts, architects and architectural societies may at the same time instruct the public and educate themselves.

The meetings of the Chapters afford however, of course, the most obvious means of promoting the educational interests both of practising members of the profession, and of the young men who are just entering it. None are so well informed but that they have much to learn; none are so young but that it is time to begin. If we would each of us take some topic of which we know something but would gladly know more (and there are many such, ranging through the whole compass of the architectural gamut), and, first ascertaining the outlines of our own ignorance, take some one of our younger friends into our confidence, indicate to him the narrow bounds of ascertained fact, and make him push off in our behalf into the ocean of the unknown, the experiment could hardly fail to be a successful one. There is none of us who is not painfully conscious of his ignorance on some familiar topics, which he knows he could entirely dispel if he only had a little leisure. One may be longing to clear up or settle his notions on the subject of Greek mouldings, to know how many varieties the Greeks really used, whether they used them on any settled principle or capriciously, whether scale had any effect on the forms adopted, what regard was paid to material, and what changes in custom came with lapse of time. Another may be unhappy about waste-pipes and stench-traps, knowing that his knowledge, though so far sufficient, was vague and without precision, and that he might any day be floored by a too knowing client or too ignorant plumber. An intelligent boy turned into a good library might solve either of these harassing questions, or collect materials for his chief to solve them, in the leisure of a month, and serve himself, his friend, and the company whom at the end of the month they would enlighten with the result of their labors. If diagrams and illustrative sketches were needed, so much the better for all concerned, though it required another month to get them up.

It is by some such immediate real and personal incentives to private study, that the junior members are to be aided; not by universal competitions, which would be difficult to carry on through the post-office; still less by finding places for young men out of employment, a search which from the nature of the case everybody must conduct for himself. Nobody takes in even a cook, without first arranging a personal interview.

This Committee at any rate are concerned not so much with finding young men in work, an office which the Secretary has done much in filling, as in showing them how best to improve their leisure. Leisure may come unasked, but to a student it is never in itself unwelcome; and a young man's first care should be to so husband his resources that when it does come he may enjoy the boon without misgivings. Men spend their lives longing for such opportunity, and it is the shortest of shortsightedness in a professional student not so to arrange his affairs as to be glad when it comes of its own accord, and it is the best result of any schooling, if it can so teach young men to study that they can employ enforced leisure to advantage. In point of fact there is no time of his life at which a few idle months are to the architect more useful. To be able, after having acquired the use of one's hands and eyes, and obtained a superficial knowledge of construction and of design, to spend whole days in rendering that knowledge more exact, visiting buildings, watching workmen, and questioning contractors; following it up with long evenings of technical or scientific reading in text-books, encyclopedias, and the professional journals; clinching the knowledge thus gained with the study of specifications or working-drawings, and illustrating the whole with sketches from the object or better still from memory,—all this, important and even necessary as it is to a proper professional training, is nevertheless almost out of reach both of the draughtsman and of the architect, since it requires the uninterrupted leisure and continuous attention that can only be commanded when one is absolutely out of work.

VALEDICTORY ADDRESS.

DELIVERED BY DR. E. L. MAGOON.

THE American Institute of Architects will please accept the present address, however imperfect in itself, as the best proof its author can give of the appreciated honor in being invited to make the attempt.

Architecture is the oldest art, and bears the most comprehensive type. It teems with the oracular inscriptions of entombed empires, and either affords information where other testimonies are silent, or confirms the facts which more dubious history asserts. Within its ruined temples yet linger the echoes of cycles long since departed, and which symbolized on their track the mightiest impulses of emulative nations in those monuments which inventive genius, coalescing with constructive skill, stamped with the attractions of beauty and strength.

The creative spirit and plastic power of architecture was first conceived and has ever been best exemplified by the Greeks. Among them art and its execution were one and the same thing; mind ruled matter in exact equipoise; form and structure stood harmoniously allied. Out of cumbrous Egypt they elaborated Doric majesty, reduced Asiatic redundance to Ionic grace, and consummated monumental art in Corinthian magnificence. In these three orders, the latent unit of all preceding aspiration and subsequent development, with perfect elegance of contour and infinite purity of lines, every type of excellence was realized. For example, the echinus of the Greek capital for refinement of conception and grace of execution is the masterpiece of plastic genius.

Architecture expresses the difference among races as language does the variety of dialects. The Dorians built in the same style that was employed by Pindar, Æschylus, and Thucydides in speech. The simplicity and elegance of the Ionians are exemplified in their temple graces not less than in Homer's matchless verse, and the smooth rhythm of Herodotus; as no less clearly the Corinthians stamped upon their invention the delicate luxuriance which characterizes the language of Isocrates. The opposing principles of Dorism and Ionism which prevailed in all institutions of Greece — politics, literature, customs, and art — were boldly embodied in sculpture and architecture. The former came from Egypt, and the latter from Asia; but both were alike indebted to Western genius for the refined symmetry which their respective orders finally assumed. The zenith of perfection was not reached until the Doric influence was impregnated by the Ionic, the material by the spiritual, and Corinthian delicacy was born to perish in the grave of its exhausted parents. When the West fell into the hands of barbarians, Roman monuments which covered the soil of Italy, Spain, and Gaul were destroyed or mutilated, and many centuries of profound darkness enveloped mankind.

In the meanwhile structural art was transformed. The arch which Rome found in Etruria and carried to the Bosphorus was so modified by Greek taste as to become the creative element and crowning glory of a new architecture. Christianity, emerging from catacombs under the throne of Cæsars who never supervised the construction of their own palaces, in the sixth century rose supreme on the pendentives of Santa Sophia, when Justinian exclaimed, "Glory be to God, I have conquered thee, O Solomon!"

That every vestige of good in the little East might be conserved and brought forward in the continuity of architectural culture for the great West, it is curious to observe how Greeks in blood and familiar with all antique worth, as were the disciples of Nestorius exiled from Constantinople in the year 431, garnered primitive treasures on the banks of the Nile, and were employed

as religious builders by Mohammedans in Arabia, Africa, and Spain.

Another current of Byzantine art flowed from the original source under exarchate auspices at Ravenna, modified by Roman traditions, until it reached the upper Rhine, where, moulded by the antique Greek spirit, the first elements of mediæval art crystallized. Occidentals in the East and Orientals in the West, from Pericles on the Acropolis to the ninth Louis of France, all pure architectural types are Greek produced and promulgated by those great cultivators of ancient and modern Europe, the cosmopolitan guardians of civilization, humanity, and the arts. Despite servitude to foreign power, almost always its enforced state, Greek genius, inspired by an ideal of intellectual perfection, maintained its brilliant vitality through disastrous war and densest gloom down to the fifteenth century, on the remotest edge of the eastern hemisphere, and thence arose after dire eclipse, to shine with augmented splendor round the world.

The Pagan mind should no more be despised than the Christian. The first turn in the wheel of human development was not less valuable than the second, which it necessarily preceded. We are now on the vantage-ground of vastly more ultimate historical knowledge and spiritual insight into architectural progress than our predecessors; and in the same proportion it behooves us to have an appreciative sympathy for the varied beauties we inherit.

The foremost scientific doctrine of our day is the divine lesson that all forces, as well as all forms in the universe, are immortal sisters and brothers. But Theseus, King of Athens, intuitively saw this truth twenty-five centuries ago, and instituted the Panathenaic games at Athens, in order to procure from the people of Africa the recognition of that city as their metropolis. Generations so moulded and inspired could not fail to cherish a kinder regard for national splendors extant or extinct; and at every step in their history we meet a reminiscence consecrated by a monument.

It is a fine thing to have a cosmopolitan spirit, and to hold all ideas as common property; but the foremost facts most clearly prove that the Greek brain is not constructed like the Roman, the German, or the English. Preceding realizations in art have not exhausted artistic possibilities. An architect may be as original now as at any former time, but it will result only from the development of his own personal power, and not from merging his individuality into something alien to himself. Because architectonic principles are invariable, it by no means follows that their amplitude is exhausted, or that modes of design should remain unchanged, stifled by traditional rules. He who is really erudite in the study and adroit in the application of architectural science may exemplify invention the most delightfully unique, as poets of the widest reading are usually the most worthy of being read. Effective intellects ever illustrate the future from the past, as brave crusaders sharpened their swords on ancestral tombs.

When Germanic tribes, mingling with barbarous torrents from the North, precipitated themselves upon the effete South, a new amalgam was formed, out of which all the moulds of modern culture have been filled. Teutons, Lombards, Franks, Burgundians, and Goths, seemingly extirpators most fatal, were in fact overflowing with the principles of a new life, which evoked a most wholesome art-movement in the stagnant pool of Rome.

Children nursed by a she-wolf were potent in fight only, and contributed to civilization but one element, — jurisprudence, the science of combat. Romans clothed every thing in a legal shape, but never embodied a beautiful idea. They were marvellous builders, without using a single type of their own invention. They were as poor in literature as in art, and for the same reason, being in both equally void of sincerity. They no more believed in the Æneid as Greeks believed the Iliad, than Augustan architects believed in the orders they first degraded and then consecrated to Venus or Apollo. All great art that ever was has been inspired and employed by the patroness of purest faith, Minerva or Mary.

In the eleventh century the monasteries of Gaul were the chief asylums of genius, and took special lead in architecture, which they made in their own image, a true and living art. But another spirit soon gained supremacy in the hands of laymen, who abandoned Romanesque construction and Byzantine ornament, preferring flowers of the field and leaves of the forest as decorative motives. Then followed the three types of pointed architecture, when quarried strength invested with chromatic charms canopied encyclopædic instruction around shrines where Jehovah was sublimely adored.

We delight in contemplating a beautiful temple, as we do a majestic tree, because all its parts from rooted trunk to soaring boughs clearly indicate vital conditions and firm endurance. Art, as the mediatress between nature and man, is the power of infusing human thought and passion into every thing which is the object of contemplation. Form, color, expression, are elements which it combines in the mould of a moral idea, and thereby the spirit of every age becomes most legible in its architecture.

Christopher Wren was knighted for paganizing England. The old St. Paul's, which he caused to be removed after the great fire, was the finest cathedral ever built, and might have been restored for much less than it cost to erect the colossal mediocrity he has left instead. It encumbers earth as the biggest illustration of that frigid reform which saved something of the science of religion, perhaps, and killed most of its sentiment. Additional products and proofs of the same spirit obtrude in all the Wren churches of London, in the Wolsey tower at Oxford, more strikingly still in the central spire at Lichfield, and most excruciating of all, in the infamous towers with which he burdened the front of Westminster Abbey.

So far as an architect feels repugnance to Catholic dogma, he is incapable of reproducing mediæval art, even when the purest specimens are directly before him. Witness Ely Cathedral, one of the best attempts at restoration, and Chester, the last. At Melrose, or Netley, or Tintern, you can wander with sorrowful delight, where only rooks and ivy and wildly waving foliage attend your scrutiny of exquisite lines and sacred symbols shattered above, beneath, and all around. But even that ruined condition does not hinder your direct sympathy with those who came thither when our ancestors were barbarians, and evolved the culture which has beautified the world. On the contrary, in the ancient shrine, "restored" but not returned, as you walk from west to east, scanning the newly burnished beauties, so largely derived from Birmingham, embodied instruction grows equivocal at each remove, and historical association is most confounded just where vivid interpretation should most appear; so that on architectural grounds alone, the scripture pathetically recurs, "They have taken away my Lord, and I know not where they have laid him."

If Protestants desire an edifice for religious use, let them provide such in harmony with their own belief, but without the distorted subordination of hallowed forms created and characterized by an ignored faith. When you remove the rite of initiation from frontal entrance to inner chancel, and over the yawning baptistery hang a florid organ where for fifteen centuries only the lighted altar stood, it is not a point of doctrine that we attack or defend, but only the stupid contempt of architectural propriety we deplore.

At the political capital of the Empire State, is a "meeting-house" built apparently after the "Dutch Corinthian" style, and surmounted by a peaked structure which from the ribbed ball and huge fish at the top is known as the "pumpkin and codfish steeple." Nor does the incongruity greatly offend the eye, since there is no attempt at fine art in the general design, and the piscatorial revolver, however cumbrous, yet serves practically as a weather-vane.

But look out upon the goodly city, or any other of our land, and you will see at a glance a score of pretentious churches, with towers guiltless of bell or clock, having spires that taper away into nothing but glaring ball and pointed iron bar, — a pumpkin and poker, — absolutely nothing more! Why allow yourself to be a party to such absurd perpetrations? As obelisk and cupola are irrelevant to Greek entablatures, a true spire is an architectural impertinence upon any structure either Byzantine or Romanesque. Upon a Christian edifice, no summit is complete without its congruous finial; and the crowning apex never properly ends but with the divine emblem alone, by which, from nave,

transept, and sanctuary foundation, up through a thousand converging lines, all was inspired and unified, — the cross.

It costs no more to build consistently than absurdly. Architects who understand their business know that ten hundred or ten thousand dollars can be put into chapel or church of rustic materials, free of all constructed ornament, and yet marked by as true lines of distinctive beauty as any metropolitan fabric that has cost millions to execute.

Are you applied to for a specific design? Ask where and for what use is the prospective edifice, and at what cost. You know the material, see the ideal, and indicate in sharp outline the perfected creation to be realized. That done on your part, the elaborated plan which was carefully studied, each separate member in its relation to every other as an organic whole, may, to please capricious whim, be outrageously mutilated, or shrink under parsimonious demand. Well, let the pious parties so murderous in their conduct be speedily hung without benefit of clergy. It is a sad necessity, doubtless; but better that a few nuisances be put under ground at once than that a disfigured masterpiece of art be obtruded upon the agonized public in perpetual gaze.

In all true architecture it is impossible to separate the soul from the body, as in the vegetable and animal kingdoms every integral part is the result of structural necessity. In nature this organic law admits of exemplification infinitely diversified; and no less in art, as mediæval works most abundantly attest. Then the exponents of a vital growth did not struggle to adapt fresh conceptions to effete forms, but perpetually modified antiquated shapes, thereby playing forth with yet gladder freedom the full advantages of new ideas.

A competent architect will create beauty out of the means that are furnished him in the nineteenth century, as in the thirteenth a prodigious quantity of churches, palaces, and chateaux, all differenced in plan, were achieved, yet each one as original in form as it was related to distinctive time and use.

Wealth is most wisely used in giving grandeur to public works, adding ornament to utility, and shedding splendor on the profitable, thus rendering every structure connected with popular progress a monument of national magnificence. The divinest authority taught that artistic excellence is not extravagance, but beneficent thrift.

Architecture commemorates departed nationalities when their dominion is no more. It is our high privilege to rake the ashes and garner the wealth of universal remains, striving to emulate when we can neither rival nor restore. To strip earth of foliage and reduce it to a naked ball, shear the sun of his beams, and blot effulgence from the stars, would be no more devastating to physical welfare, than it would inflict mental misery to ignore the ennobling influence of architecture on mankind.

The bases of the arts touch each other, and no devotee can be expert in either who does not earnestly relish all. Magnanimous admiration appropriates the excellence it confronts, while ungenerous depreciation is its own punishment, because envy is impotency. Since God will not have his work made manifest by one who is ashamed of truth anywhere, the cowardly are never creative. Only as divine integrity kindles the fearless but friendly heart, will fluent fingers elaborate work divine.

Every nation can do something which others cannot, showing that the net amount of mankind does not greatly vary. As each person is superior to all others in some individual faculty, that one is altogether the noblest who most assimilates himself to the best in each competitor, and so aggregates every variety of worth.

We are most divinized by closest contact with truest symbols of divinity, those temple glories which have been the culture of humanity in all ages. In their presence the mind spontaneously opens responsive to laws which traverse the universe, suggest infinite relations, and inspire the wish to admire evermore.

In rendering worship to exalted worth we elevate ourselves; and just so far as we evince sensibility to superior merit, we are by it imbued. Great masters raise us from our dead level by their generous aspirations; they lift us into the magnificent scope of their own free souls, and endow us with a more heavenly existence. Lapsing centuries only add preciousness to such men and their works; time, which defaces or obscures the fairest things, but dissolves temporary mists which overshadow them, and they re-appear with enhanced splendor to the clarified vision of remotest generations. Great architects are ever living wealth. They constitute the foremost life of the eras to which they pertain, and send vitality down to ages which long after supervene. There is a power in architectonic genius to quicken disintegrated clods. The dead, in the limbo of extinct marvels, hear it responding to its call in the resurrection of a newer and more divine existence.

At ten o'clock in the evening of Oct. 11, 1492, near this very hour, lurid light was first seen by Columbus on the eastern shore of a new hemisphere. Out through the dusky view before the great discoverer that night, lay a whole world of all possible productiveness. And so, from the terminus of our first century in national progress, we contemplate the magnificent domain of predestined development. You cannot fail to perceive in sublime perspective the noblest arena ever offered to artistic competition, nor will you cease to ennoble your own manhood as the best guaranty of professional success.

The Divine Architect has designed earth as an institute, in which himself is superintending the education of our race. Therein we should learn that the True, the Beautiful, and the Good are exactly co-ordinate, and neither of them can fully effect its end without the co-operative ministry of its associates in every sphere. It follows that æsthetic virtue is its own reward. As the love of nature grows with the study of nature, so delight in art deepens and strengthens with magnanimous progress in devout pursuit.

The laws of earth and heaven are connate, centralized in the human soul, that microcosmic temple wherein all creativeness unfolds. Parthenon and Pantheon, Santa Croce and Cologne, are only specimen copies after a divine model as yet but inadequately expressed.

According to classic legend, Helen, when she explored nature for a model of a golden cup that she should offer upon the altar of Diana as perfectly beautiful, found nothing more exquisite than her own bosom. Nor is there any thing in creation we can present to the Creator more worthy or acceptable than our own immortal being, when fairly dealt with and elicited. May each of you exemplify masterly skill in all charming design, and execute in your own person a consummate temple of the Holy Spirit!